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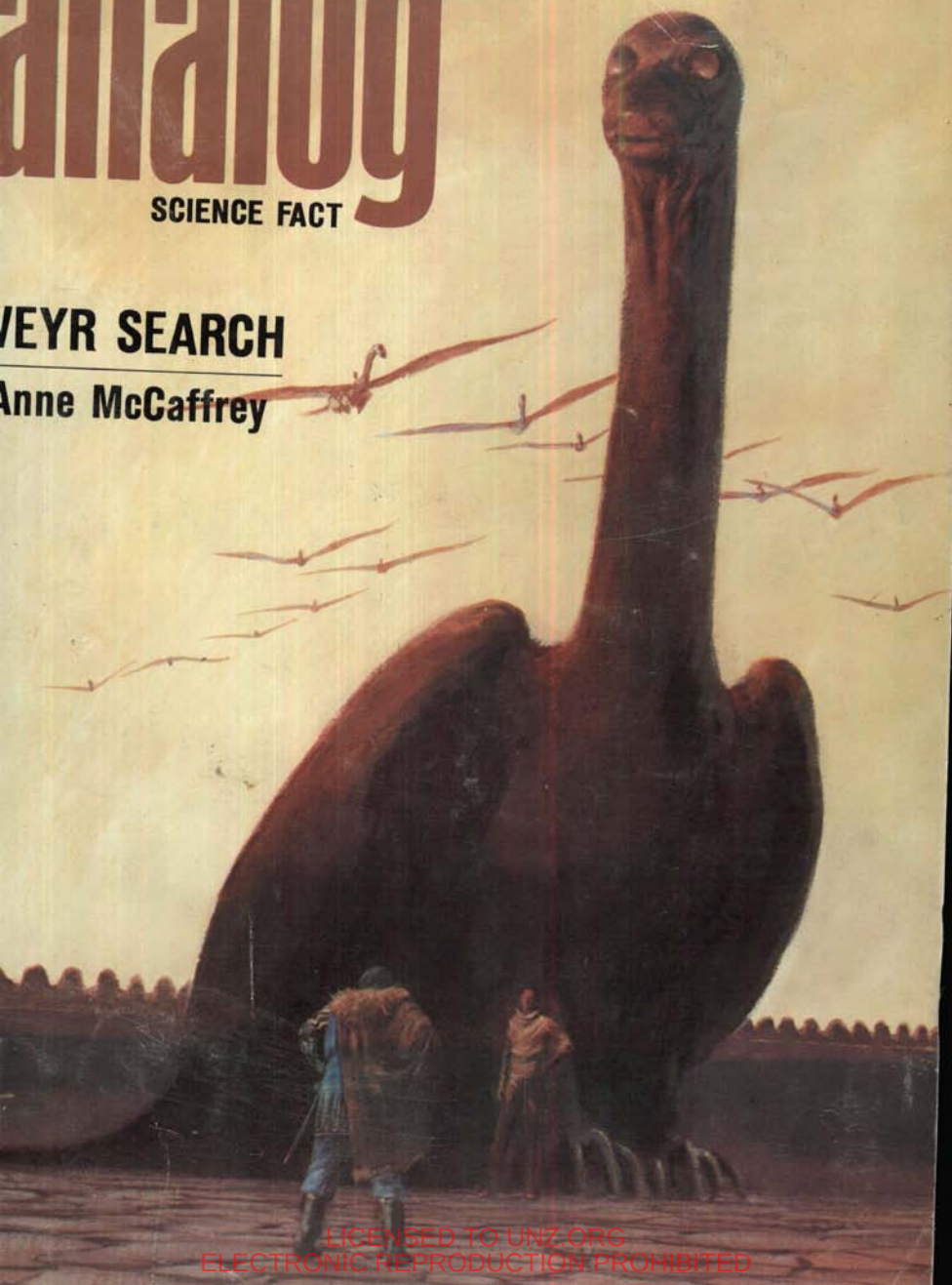

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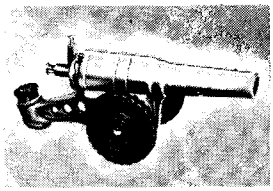

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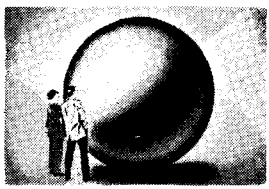

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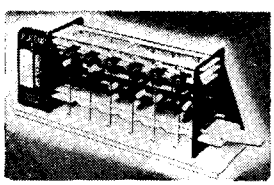

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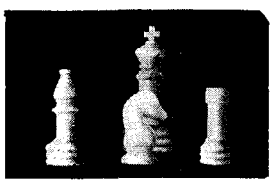

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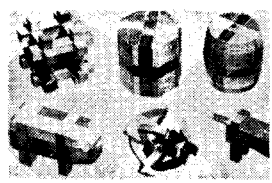

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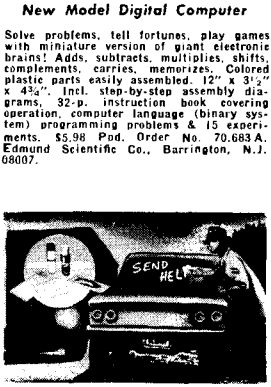

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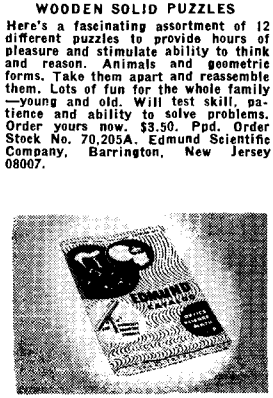

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Assistant Editor
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NEXT ISSUE ON SALE
October 10, 1967
$6.00 per year
in the U.S.A.
60 cents per copy

Cover by
John Schoenherr

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The Nature of Intelligent Aliens

EDITORIAL BY JOHN W. CAMPBELL

I've had fun for some years with this question—try it on your friends and see how many of them come up with the honest answer:

You've been to the zoo, seen the various animals from all over Earth. Of all the animals Earth has produced, which is the most deadly, dangerous, ferocious fighter-killer of them all?

The answer is, of course, quite obvious—though very few human beings are self-honest enough to recognize that obvious answer: The one animal that puts all the other animals in cages. The one that domesticates elephants and water buffalo, trains lions and tigers to perform for his amusement—Man.

We tend to think of ourselves as being poor, hapless, thin-skinned, furless, weak, slow-running, with poor sense of sight, hearing, and odor—terribly handicapped in competition with the other animals of Earth.

In the first place, it's been shown that normal human ears are capable of hearing the rustling-hissing noise produced by thermal movement of the air molecules of the atmosphere. It's obvious that no possible hearing mechanism can go further than that—you're already down to the fundamental noise level of the medium.

The human eye reacts to as little as six quanta of light; the best photoelectric systems require about ten, and the most sensitive photographic emulsions require about one hundred. Cats can do a wee bit better than men, because a cat's retina is backed by a reflective layer, giving the retina a second chance to catch a photon that leaks through, while man has an absorptive backing that stops photons that pass through the retina without reacting. The cat's eye is, also, most sensitive to the red-orange (rather like the color of a neon light) part of the spectrum, where man's maximum is in the yellow-green. The cat's reflective retina-backing means its eye can never focus sharply; the image that's reflected back cannot be in sharp focus, if the image at the retina is—it's traveled farther from the lens. The cat's red-orange peak matches the nighttime glow of the sky as the

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ions excited by solar radiation during the day discharge their absorbed energy. Perfect for a nighttime hunter.

Man's maximum in the yellow-green matches almost perfectly the yellow-green illumination that filters down, during the day, through the layers of leaves in a forest of jungle.

So far as acuity goes—the astronauts reported seeing things (trains, railroads, et cetera) on the surface of the Earth, while up in orbit, that doctors of a dozen disciplines, ranging from optical engineers, lens designers and mathematicians through medical specialists, all agreed were provably invisible. Beyond the power of eye lens or retina to resolve.

And the next batch of astronauts reported seeing things that couldn't be seen—and proved it.

The myth that dogs can hear sounds human beings can't rests on two things; first, dogs aren't so busy thinking about other things, and pay more attention to their ears, and second, dogs are smaller than human beings, and their smaller auditory equipment can hear somewhat higher frequencies. But I remember the confusion of a neighbor who tried to demonstrate to his four-year-old daughter that Fritz, their large, rather elderly German shepherd could hear the "silent dog-whistle" but that people couldn't. The small daughter, with young ears, was distinctly bothered by the shrill whistle; the big, elderly dog couldn't hear it at all.

We know a heck of a lot of things about what human beings are like . . . that just ain't so. We're among the largest and most powerful animals, *purely as animals,* this planet has produced. The puma, or mountain lion, is usually considered a large, powerful, and deadly-dangerous animal; they average just about the same weight as a moderate-to-small man.

Herbivores naturally tend to run to somewhat larger size than carnivores or omnivores; their food supply is less agile, and more abundant.

And speaking of agility—human beings can, and in many parts of the world for many millennia did, run down antelope, deer, et cetera, by the simple process of chasing them until the prey collapsed from exhaustion. Man's not quite so poor a runner as people tend to imagine; he isn't as fast as a cheetah or greyhound—but he can run longer, farther, and more persistently than any other creature on Earth.

So . . . with a few myths brushed out of the way, let's take a look at what it means to be the dominant intelligent species on a planet, and what characteristics we can expect to find in alien intelligences.

Now the matter of sensory equipment is open to considerable variation; a people evolving on a planet in an orbit close to a red dwarf sun might have Earth-like temperatures,

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but would not have the yellow-green visual sensitivity Man does, obviously. Since no star with a surface temperature in the range of the viciously luminous O or B classes—50,000° K. and up—will continue to shine for more than a few megayears, no life forms can evolve around such a star.

A planet with a deep, dense atmosphere under heavy gravity will call for some considerable differences in auditory equipment.

But some things remain fairly universal probabilities. The aliens will be fairly large bipeds, omnivorous, thin-skinned, with no natural armor except around the central nervous system, where it will also serve as part of the endoskeletal support structure. Their sensory organs will be of the very best quality, tending more to acuity and precision than to raw sensitivity. They will have binocular vision, and binaural hearing, with fixed-mounted ears having a complexly creased and folded external ear structure, or an equally complexly structured lens system internally, as the porpoise does on Earth.

There are reasons why man is thin-skinned, unarmored, and bipedal. In the course of evolution, any structure that the race can survive without—gets lost. There are no hexapod land animals beyond the insects; their environment is so wildly different than that of larger animals that the situations are not comparable. Climbing over grass stems and leaf stalks with a mass measured in small fractions of a gram is not comparable to a gravity-dominated stroll across a meadow. Early land animals developed four supports as being necessary and sufficient. Six weren't necessary, and required an excessively complicated neural network to coordinate them, and some complicated mechanical engineering to attach them. (Do the middle limbs of a centaurial creature attach to a second pelvis—or to a second pair of shoulder blades?)

To balance on two legs requires an even more complex neural network, and that evolves long after the four-limbed tradition has been evolved into the entire ecology. So whether the species goes to two legs and two wings, or two legs and two manipulative limbs—that comes late in evolution, long after the four-limbed system is ineradicably and unalterably fixed.

Unalterably, that is, with respect to regaining six limbs—a species can always *drop* organs; regaining them seems to be impossible, going on the evidence of a billion years, or so, of evolution on Earth.

Our alien might, of course, have evolved the highly useful added feature of a prehensile tail; we're stuck with being tailless, thus deprived of what might have been an invaluable third hand, because the thing was dropped when our line developed a better method of communication. (For most mammals, the tail is an

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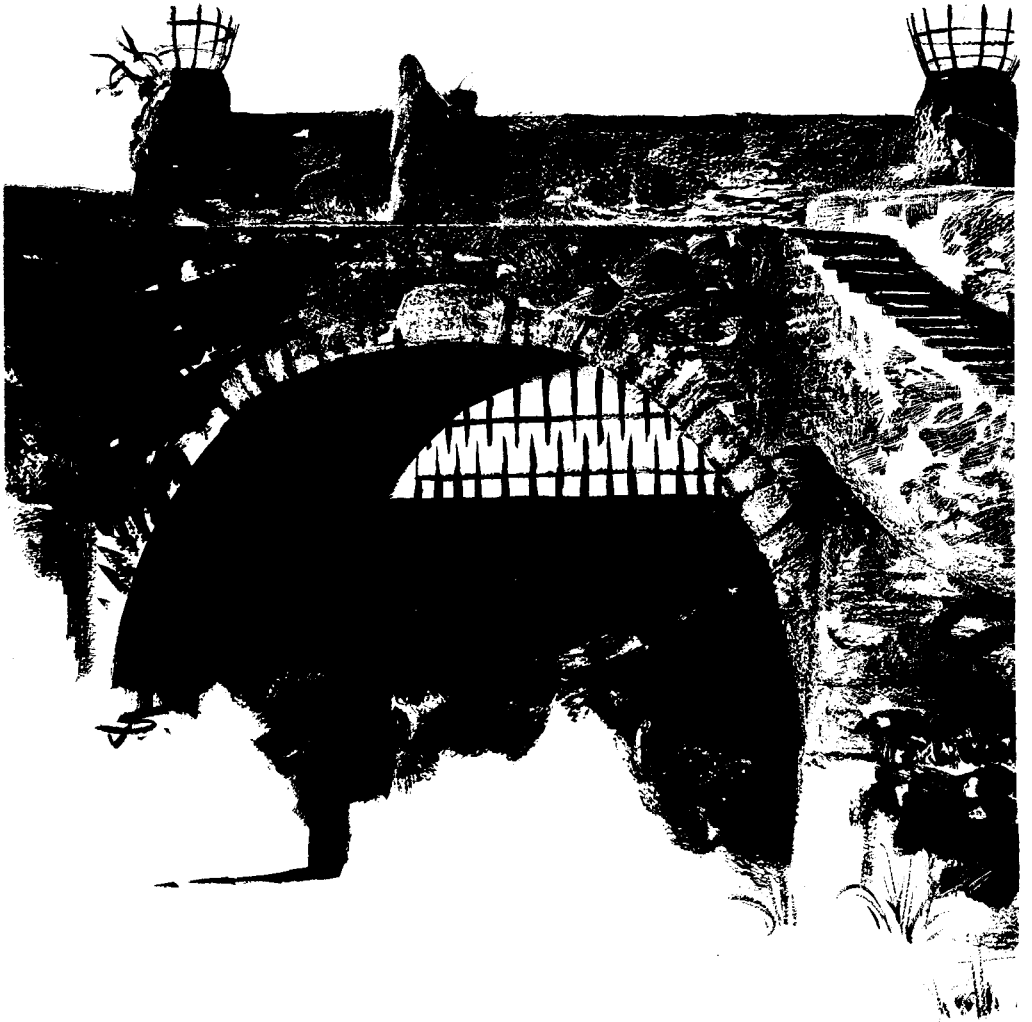

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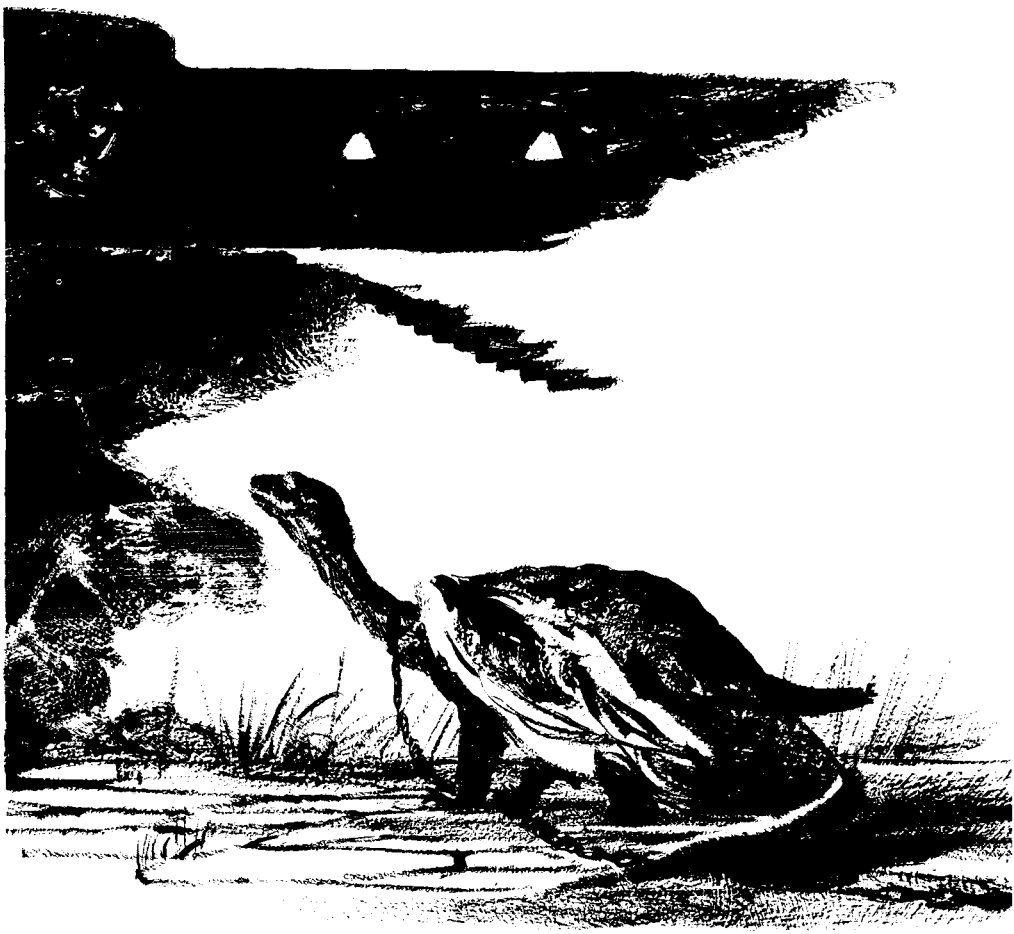
WEYR SEARCH

Usually, when intelligent aliens meet, there will be conflict. But when Man goes Out There, he may meet situations so rugged that all his efforts plus the best efforts of the alien natives must be combined to survive!

ANNE McCAFFREY

Illustrated by John Schoenherr



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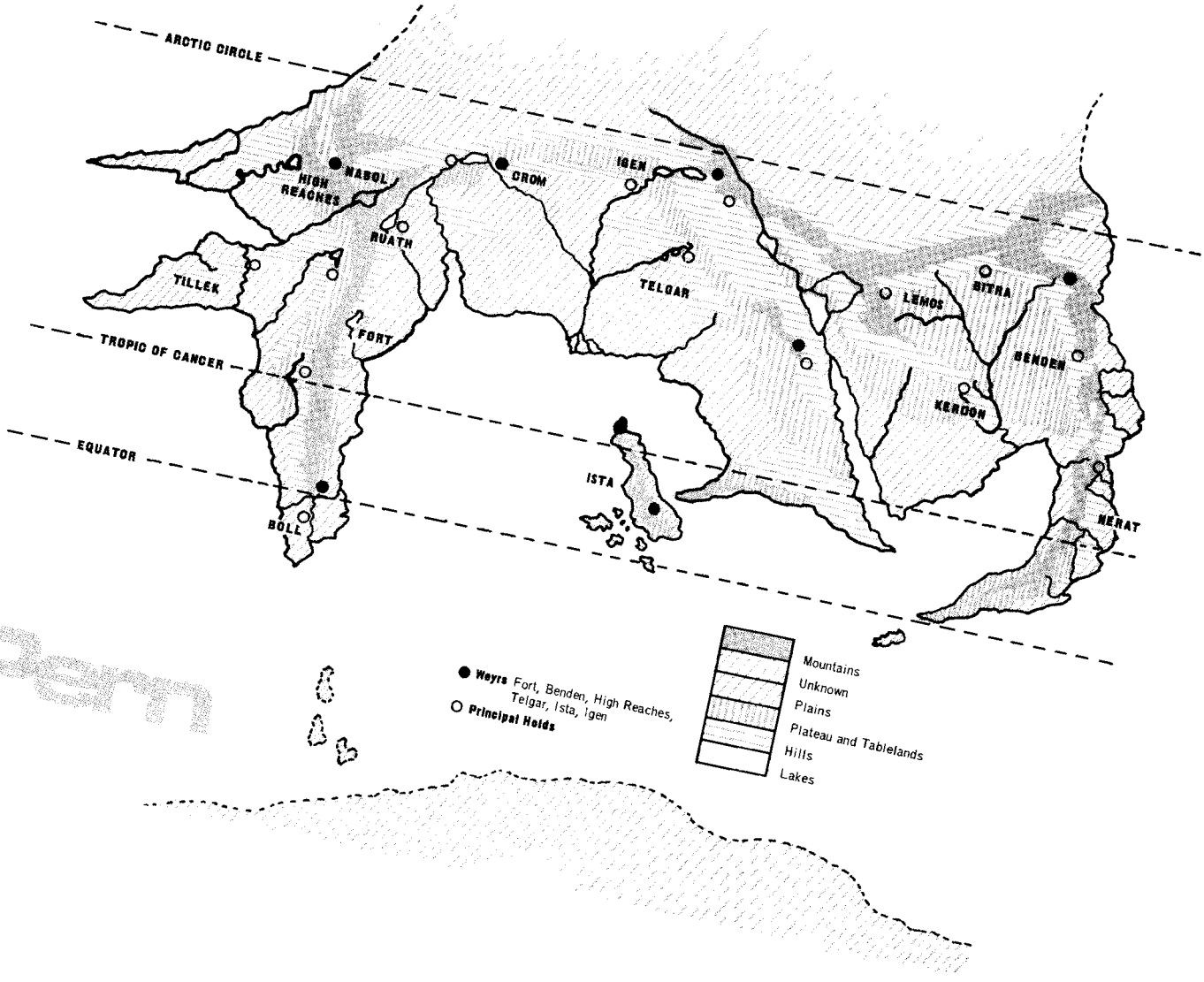

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When is a legend legend? Why is a myth a myth? How old and disused must a fact be for it to be relegated to the category: Fairy tale? And why do certain facts remain incontrovertible, while others lose their validity to assume a shabby, unstable character?

Rukbat, in the Sagittarian sector, was a golden G-type star. It had five planets, plus one stray it had attracted and held in recent millennia. Its third planet was enveloped by air man could breathe, boasted water he could drink, and possessed a gravity which permitted man to walk confidently erect. Men discovered it, and promptly colonized it, as they did every habitable planet they came to and then —whether callously or through collapse of empire, the colonists never discovered, and eventually forgot to ask—left the colonies to fend for themselves.

When men first settled on Rukbat's third world, and named it Pern, they had taken little notice of the stranger-planet, swinging around its primary in a wildly erratic elliptical orbit. Within a few generations they had forgotten its existence. The desperate path the wanderer pursued brought it close to its stepsister every two hundred [Terran] years at perihelion.

When the aspects were harmonious and the conjunction with its sister-planet close enough, as it often was, the indigenous life of the wanderer sought to bridge the space gap to the more temperate and hospitable planet.

It was during the frantic struggle to combat this menace dropping through Pern's skies like silver threads, that Pern's contact with the mother-planet weakened and broke. Recollections of Earth receded further from Pernese history with each successive generation until memory of their origins degenerated past legend or myth, into oblivion.

To forestall the incursions of the dreaded Threads, the Pernese, with the ingenuity of their forgotten Yankee forebears and between first onslaught and return, developed a highly specialized variety of a life form indigenous to their adopted planet—the winged, tailed, and fire-breathing dragons, named for the Earth legend they resembled. Such humans as had a high empathy rating and some innate telepathic ability were trained to make use of and preserve this unusual animal whose ability to teleport was of immense value in the fierce struggle to keep Pern bare of Threads.

The dragons and their dragonmen, a breed apart, and the shortly renewed menace they battled, created a whole new group of legends and myths.

As the menace was conquered the populace in the Holds of Pern settled into a more comfortable way of life. Most of the dragon Weyrs eventually were abandoned, and the descendants of heroes fell

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into disfavor, as the legends fell into disrepute.

This, then, is a tale of legends disbelieved and their restoration. Yet —how goes a legend? When is myth?

Drummer, beat, and piper, blow,
Harper, strike, and soldier, go.
Free the flame and sear the grasses
Till the dawning Red Star passes.

Lessa woke, cold. Cold with more than the chill of the everlastingly clammy stone walls. Cold with the prescience of a danger greater than when, ten full Turns ago, she had run, whimpering, to hide in the watch-wher's odorous lair.

Rigid with concentration, Lessa lay in the straw of the redolent cheese room, sleeping quarters shared with the other kitchen drudges. There was an urgency in the ominous portent unlike any other forewarning. She touched the awareness of the watch-wher, slithering on its rounds in the courtyard. It circled at the choke-limit of its chain. It was restless, but oblivious to anything unusual in the pre-dawn darkness.

The danger was definitely not within the walls of Hold Ruath. Nor approaching the paved perimeter without the Hold where relentless grass had forced new growth through the ancient mortar, green witness to the deterioration of the once stone-clean Hold. The danger was not advancing up the now little used causeway from the valley, nor lurking in the craftsmen's stony holdings at the foot of the Hold's cliff. It did not scent the wind that blew from Tillek's cold shores. But still it twanged sharply through her senses, vibrating every nerve in Lessa's slender frame. Fully roused, she sought to identify it before the prescient mood dissolved. She cast outward, towards the Pass, farther than she had ever pressed. Whatever threatened was not in Ruatha . . . yet. Nor did it have a familiar flavor. It was not, then, Fax.

Lessa had been cautiously pleased that Fax had not shown himself at Hold Ruath in three full Turns. The apathy of the craftsmen, the decaying farmholds, even the green-etched stones of the Hold infuriated Fax, self-styled Lord of the High Reaches, to the point where he preferred to forget the reason why he had subjugated the once proud and profitable Hold.

Lessa picked her way among the sleeping drudges, huddled together for warmth, and glided up the worn steps to the kitchen-proper. She slipped across the cavernous kitchen to the stable-yard door. The cobbles of the yard were icy through the thin soles of her sandals and she shivered as the predawn air penetrated her patched garment.

The watch-wher slithered across the yard to greet her, pleading, as it

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always did, for release. Glancing fondly down at the awesome head, she promised it a good rub presently. It crouched, groaning, at the end of its chain as she continued to the grooved steps that led to the rampart over the Hold's massive gate. Atop the tower, Lessa stared towards the east where the stony breasts of the Pass rose in black relief against the gathering day.

Indecisively she swung to her left, for the sense of danger issued from that direction as well. She glanced upward, her eyes drawn to the red star which had recently begun to dominate the dawn sky. As she stared, the star radiated a final ruby pulsation before its magnificence was lost in the brightness of Pern's rising sun.

For the first time in many Turns, Lessa gave thought to matters beyond Pern, beyond her dedication to vengeance on the murderer Fax for the annihilation of her family. Let him but come within Ruath Hold now and he would never leave.

But the brilliant ruby sparkle of the Red Star recalled the Disaster Ballads—grim narratives of the heroism of the dragonriders as they braved the dangers of *between* to breathe fiery death on the silver Threads that dropped through Pern's skies. Not one Thread must fall to the rich soil, to burrow deep and multiply, leaching the earth of minerals and fertility. Straining her eyes as if vision would bridge the gap between peril and person, she stared intently eastward. The watch-wher's thin, whistled question reached her just as the prescience waned.

Dawnlight illumined the tumbled landscape, the unplowed fields in the valley below. Dawnlight fell on twisted orchards, where the sparse herds of milchbeasts hunted stray blades of spring grass. Grass in Ruatha grew where it should not, died where it should flourish. An odd brooding smile curved Lessa's lips. Fax realized no profit from his conquest of Ruatha . . . nor would he, while she, Lessa, lived. And he had not the slightest suspicion of the source of this undoing.

Or had he? Lessa wondered, her mind still reverberating from the savage prescience of danger. East lay Fax's ancestral and only legitimate Hold. Northeast lay little but bare and stony mountains and Benden, the remaining Weyr, which protected Pern.

Lessa stretched, arching her back, inhaling the sweet, untainted wind of morning.

A cock crowed in the stableyard. Lessa whirled, her face alert, eyes darting around the outer Hold lest she be observed in such an uncharacteristic pose. She unbound her hair, letting it fall about her face concealingly. Her body drooped into the sloppy posture she affected. Quickly she thudded down the stairs, crossing to the watch-wher. It lurred piteously, its great eyes blinking against the growing day-

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light. Oblivious to the stench of its rank breath, she hugged the scaly head to her, scratching its ears and eye ridges. The watch-wher was ecstatic with pleasure, its long body trembling, its clipped wings rustling. It alone knew who she was or cared. And it was the only creature in all Pern she trusted since the day she had blindly sought refuge in its dark stinking lair to escape Fax's thirsty swords that had drunk so deeply of Ruathan blood.

Slowly she rose, cautioning it to remember to be as vicious to her as to all should anyone be near. It promised to obey her, swaying back and forth to emphasize its reluctance.

The first rays of the sun glanced over the Hold's outer wall. Crying out, the watch-wher darted into its dark nest. Lessa crept back to the kitchen and into the cheese room.

From the Weyr and from the Bowl
Bronze and brown and blue and green
Rise the dragonmen of Pern,
Aloft, on wing, seen, then unseen.

F'lar on bronze Mnementh's great neck appeared first in the skies above the chief Hold of Fax, so-called Lord of the High Reaches. Behind him, in proper wedge formation, the wingmen came into sight. F'lar checked the formation automatically; as precise as at the moment of entry to *between*.

As Mnementh curved in an arc that would bring them to the perimeter of the Hold, consonant with the friendly nature of this visitation, F'lar surveyed with mounting aversion the disrepair of the ridge defenses. The firestone pits were empty and the rock-cut gutters radiating from the pits were green-tinged with a mossy growth.

Was there even one lord in Pern who maintained his Hold rocky in observance of the ancient Laws? F'lar's lips tightened to a thinner line. When this Search was over and the Impression made, there would have to be a solemn, punitive Council held at the Weyr. And by the golden shell of the queen, he, F'lar, meant to be its moderator. He would replace lethargy with industry. He would scour the green and dangerous scum from the heights of Pern, the grass blades from its stoneworks. No verdant skirt would be condoned in any farmhold. And the tithings which had been so miserly, so grudgingly presented would, under pain of firestoning, flow with decent generosity into the Dragonweyr.

Mnementh rumbled approvingly as he vaned his pinions to land lightly on the grass-etched flagstones of Fax's Hold. The bronze dragon furled his great wings, and F'lar heard the warning claxon in the Hold's Great Tower. Mnementh dropped to his knees as F'lar indicated he wished to dismount. The bronze rider stood by Mnementh's

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huge wedge-shaped head, politely awaiting the arrival of the Hold lord. F'lar idly gazed down the valley, hazy with warm spring sunlight. He ignored the furtive heads that peered at the dragonman from the parapet slits and the cliff windows.

F'lar did not turn as a rush of air announced the arrival of the rest of the wing. He knew, however, when F'nor, the brown rider, his half-brother, took the customary position on his left, a dragon-length to the rear. F'lar caught a glimpse of F'nor's boot-heel twisting to death the grass crowding up between the stones.

An order, muffled to an intense whisper, issued from within the great court, beyond the open gates. Almost immediately a group of men marched into sight, led by a heavy-set man of medium height.

Mnementh arched his neck, angling his head so that his chin rested on the ground. Mnementh's many faceted eyes, on a level with F'lar's head, fastened with disconcerting interest on the approaching party. The dragons could never understand why they generated such abject fear in common folk. At only one point in his life span would a dragon attack a human and that could be excused on the grounds of simple ignorance. F'lar could not explain to the dragon the politics behind the necessity of inspiring awe in the holders, lord and craftsman alike. He could only observe that the fear and apprehension showing in the faces of the advancing squad which troubled Mnementh was oddly pleasing to him, F'lar.

"Welcome, Bronze Rider, to the Hold of Fax, Lord of the High Reaches. He is at your service," and the man made an adequately respectful salute.

The use of the third person pronoun could be construed, by the meticulous, to be a veiled insult. This fit in with the information F'lar had on Fax; so he ignored it. His information was also correct in describing Fax as a greedy man. It showed in the restless eyes which flicked at every detail of F'lar's clothing, at the slight frown when the intricately etched sword-hilt was noticed.

F'lar noticed, in his own turn, the several rich rings which flashed on Fax's left hand. The overlord's right hand remained slightly cocked after the habit of the professional swordsman. His tunic, of rich fabric, was stained and none too fresh. The man's feet, in heavy wher-hide boots, were solidly planted, weight balanced forward on his toes. A man to be treated cautiously, F'lar decided, as one should the conqueror of five neighboring Holds. Such greedy audacity was in itself a revelation. Fax had married into a sixth . . . and had legally inherited, however unusual the circumstances, the seventh. He was a lecherous man by reputation.

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Within these seven Holds, F'lar anticipated a profitable Search. Let R'gul go southerly to pursue Search among the indolent, if lovely, women there. The Weyr needed a strong woman this time; Jora had been worse than useless with Nemorth. Adversity, uncertainty: those were the conditions that bred the qualities F'lar wanted in a weyrwoman.

"We ride in Search," F'lar drawled softly, "and request the hospitality of your Hold, Lord Fax."

Fax's eyes widened imperceptibly at mention of Search.

"I had heard Jora was dead," Fax replied, dropping the third person abruptly as if F'lar had passed some sort of test by ignoring it. "So Nemorth has a new queen, hm-m-m?" he continued, his eyes darting across the rank of the ring, noting the disciplined stance of the riders, the healthy color of the dragons.

F'lar did not dignify the obvious with an answer.

"And, my Lord—?" Fax hesitated, expectantly inclining his head slightly towards the dragonman.

For a pulse beat, F'lar wondered if the man were deliberately provoking him with such subtle insults. The name of bronze riders should be as well known throughout Pern as the name of the Dragonqueen and her Weyrwoman. F'lar kept his face composed, his eyes on Fax's.

Leisurely, with the proper touch of arrogance, F'nor stepped forward, stopping slightly behind Mnementh's head, one hand negligently touching the jaw hinge of the huge beast.

"The Bronze Rider of Mnementh, Lord F'lar, will require quarters for himself. I, F'nor, brown rider, prefer to be lodged with the wingmen. We are, in number, twelve."

F'lar liked that touch of F'nor's, totting up the wing strength, as if Fax were incapable of counting. F'nor had phrased it so adroitly as to make it impossible for Fax to protest the insult.

"Lord F'lar," Fax said through teeth fixed in a smile, "the High Reaches are honored with your Search."

"It will be to the credit of the High Reaches," F'lar replied smoothly, "if one of its own supplies the Weyr."

"To our everlasting credit," Fax replied as suavely. "In the old days, many notable weyrwomen came from my Holds."

"Your Holds?" asked F'lar, politely smiling as he emphasized the plural. "Ah, yes, you are now overlord of Ruatha, are you not? There have been many from that Hold."

A strange tense look crossed Fax's face. "Nothing good comes from Ruath Hold." Then he stepped aside, gesturing F'lar to enter the Hold.

Fax's troop leader barked a hasty order and the men formed two lines, their metal-edged boots flicking sparks from the stones.

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At unspoken orders, all the dragons rose with a great churning of air and dust. F'lar strode nonchalantly past the welcoming files. The men were rolling their eyes in alarm as the beasts glided above to the inner courts. Someone on the high tower uttered a frightened yelp as Mnementh took his position on that vantage point. His great wings drove phosphoric-scented air across the inner court as he maneuvered his great frame onto the inadequate landing space.

Outwardly oblivious to the consternation, fear and awe the dragons inspired, F'lar was secretly amused and rather pleased by the effect. Lords of the Holds needed this reminder that they must deal with dragons, not just with riders, who were men, mortal and murderable. The ancient respect for dragonmen as well as dragonkind must be reinstilled in modern breasts.

"The Hold has just risen from table, Lord F'lar, if . . ." Fax suggested. His voice trailed off at F'lar's smiling refusal.

"Convey my duty to your lady, Lord Fax," F'lar rejoined, noticing with inward satisfaction the tightening of Fax's jaw muscles at the ceremonial request.

"You would prefer to see your quarters first?" Fax countered.

F'lar flicked an imaginary speck from his soft wher-hide sleeve and shook his head. Was the man buying time to sequester his ladies as the old time lords had?

"Duty first," he said with a rueful shrug.

"Of course," Fax all but snapped and strode smartly ahead, his heels pounding out the anger he could not express otherwise. F'lar decided he had guessed correctly.

F'lar and F'nor followed at a slower pace through the double-doored entry with its massive metal panels, into the great hall, carved into the cliffside.

"They eat not badly," F'nor remarked casually to F'lar, appraising the remnants still on the table.

"Better than the Weyr, it would seem," F'lar replied dryly.

"Young roasts and tender," F'nor said in a bitter undertone, "while the stringy, barren beasts are delivered up to us."

"The change is overdue," F'lar murmured, then raised his voice to conversational level. "A well-favored hall," he was saying amiably as they reached Fax. Their reluctant host stood in the portal to the inner Hold, which, like all such Holds, burrowed deep into stone, traditional refuge of all in time of peril.

Deliberately, F'lar turned back to the banner-hung Hall. "Tell me, Lord Fax, do you adhere to the old practices and mount a dawn guard?"

Fax frowned, trying to grasp F'lar's meaning.

"There is always a guard at the Tower."

"An easterly guard?"

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Fax's eyes jerked towards F'lar, then to F'nor.

"There are always guards," he answered sharply, "on all the approaches."

"Oh, just the approaches," and F'lar nodded wisely to F'nor.

"Where else?" demanded Fax, concerned, glancing from one dragonman to the other.

"I must ask that of your harper. You do keep a trained harper in your Hold?"

"Of course. I have several trained harpers," and Fax jerked his shoulders straighter.

F'lar affected not to understand.

"Lord Fax is the overlord of six other Holds," F'nor reminded his wingleader.

"Of course," F'lar assented, with exactly the same inflection Fax had used a moment before.

The mimicry did not go unnoticed by Fax but as he was unable to construe deliberate insult out of an innocent affirmative, he stalked into the glow-lit corridors. The dragonmen followed.

The women's quarters in Fax's Hold had been moved from the traditional innermost corridors to those at cliff-face. Sunlight poured down from three double-shuttered, deep-casement windows in the outside wall. F'lar noted that the bronze hinges were well oiled, and the sills regulation spear-length. Fax had not, at least, diminished the protective wall.

The chamber was richly hung with appropriately gentle scenes of women occupied in all manner of feminine tasks. Doors gave off the main chamber on both sides into smaller sleeping alcoves and from these, at Fax's bidding, his women hesitantly emerged. Fax sternly gestured to a blue-gowned woman, her hair white-streaked, her face lined with disappointments and bitterness, her body swollen with pregnancy. She advanced awkwardly, stopping several feet from her lord. From her attitude, F'lar deduced that she came no closer to Fax than was absolutely necessary.

"The Lady of Crom, mother of my heirs," Fax said without pride or cordiality.

"My Lady—" F'lar hesitated, waiting for her name to be supplied.

She glanced warily at her lord.

"Gemma," Fax snapped curtly.

F'lar bowed deeply. "My Lady Gemma, the Weyr is on Search and requests the Hold's hospitality."

"My Lord F'lar," the Lady Gemma replied in a low voice, "you are most welcome."

F'lar did not miss the slight slur on the adverb nor the fact that Gemma had no trouble naming him. His smile was warmer than courtesy demanded, warm with gratitude and sympathy. Looking at the number of women in these quarters, F'lar thought there might be one or two Lady Gemma could bid farewell without regret.

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Fax preferred his women plump and small. There wasn't a saucy one in the lot. If there once had been, the spirit had been beaten out of her. Fax, no doubt, was stud, not lover. Some of the covey had not all winter long made much use of water, judging by the amount of sweet oil gone rancid in their hair. Of them all, if these were all, the Lady Gemma was the only willful one; and she, too old.

The amenities over, Fax ushered his unwelcome guests outside, and led the way to the quarters he had assigned the bronze rider.

"A pleasant room," F'lar acknowledged, stripping off gloves and wher-hide tunic, throwing them carelessly to the table. "I shall see to my men and the beasts. They have been fed recently," he commented, pointing up Fax's omission in inquiring. "I request liberty to wander through the crafthold."

Fax sourly granted what was a dragonman's traditional privilege.

"I shall not further disrupt your routine, Lord Fax, for you must have many demands on you, with seven Holds to supervise." F'lar inclined his body slightly to the overlord, turning away as a gesture of dismissal. He could imagine the infuriated expression on Fax's face from the stamping retreat.

F'nor and the men had settled themselves in a hastily vacated barrackroom. The dragons were perched comfortably on the rocky ridges above the Hold. Each rider kept his dragon in light, but alert, charge. There were to be no incidents on a Search.

As a group, the dragonmen rose at F'lar's entrance.

"No tricks, no troubles, but look around closely," he said laconically. "Return by sundown with the names of any likely prospects." He caught F'nor's grin, remembering how Fax had slurred over some names. "Descriptions are in order and craft affiliation."

The men nodded, their eyes glinting with understanding. They were flatteringly confident of a successful Search even as F'lar's doubts grew now that he had seen Fax's women. By all logic, the pick of the High Reaches should be in Fax's chief Hold—but they were not. Still, there were many large craftholds not to mention the six other High Holds to visit. All the same . . .

In unspoken accord F'lar and F'nor left the barracks. The men would follow, unobtrusively, in pairs or singly, to reconnoiter the crafthold and the nearer farmholds. The men were as overtly eager to be abroad as F'lar was privately. There had been a time when dragonmen were frequent and favored guests in all the great Holds throughout Pern, from southern Fort to high north Igen. This pleasant custom, too, had died along with other observances, evidence of the low regard in which the Weyr was presently held. F'lar vowed to correct this.

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He forced himself to trace in memory the insidious changes. The Records, which each Weyrwoman kept, were proof of the gradual, but perceptible, decline, traceable through the past two hundred full Turns. Knowing the facts did not alleviate the condition. And F'lar was of that scant handful in the Weyr itself who did credit Records and Ballad alike. The situation might shortly reverse itself radically if the old tales were to be believed.

There was a reason, an explanation, a purpose, F'lar felt, for every one of the Weyr laws from First Impression to the Firestones: from the grass-free heights to ridge-running gutters. For elements as minor as controlling the appetite of a dragon to limiting the inhabitants of the Weyr. Although why the other five Weyrs had been abandoned, F'lar did not know. Idly he wondered if there were records, dusty and crumbling, lodged in the disused Weyrs. He must contrive to check when next his wings flew patrol. Certainly there was no explanation in Benden Weyr.

"There is industry but no enthusiasm," F'nor was saying, drawing F'lar's attention back to their tour of the crafthold.

They had descended the guttered ramp from the Hold into the crafthold proper, the broad roadway lined with cottages up to the imposing stone crafthalls. Silently F'lar noted moss-clogged gutters on the roofs, the vines clasping the walls. It was painful for one of his calling to witness the flagrant disregard of simple safety precautions. Growing things were forbidden near the habitations of mankind.

"News travels fast," F'nor chuckled, nodding at a hurrying craftsman, in the smock of a baker, who gave them a mumbled good day. "Not a female in sight."

His observation was accurate. Women should be abroad at this hour, bringing in supplies from the storehouses, washing in the river on such a bright warm day, or going out to the farmholds to help with planting. Not a gowned figure in sight.

"We used to be preferred mates," F'nor remarked caustically.

"We'll visit the Clothmen's Hall first. If my memory serves me right . . ."

"As it always does . . ." F'nor interjected wryly. He took no advantage of their blood relationship but he was more at ease with the bronze rider than most of the dragonmen, the other bronze riders included. F'lar was reserved in a close-knit society of easy equality. He flew a tightly disciplined wing but men maneuvered to serve under him. His wing always excelled in the Games. None ever floundered in *between* to disappear forever and no beast in his wing sickened, leaving a man in dragonless exile from the Weyr, a part of him numb forever.

"L'tol came this way and settled

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in one of the High Reaches," F'lar continued.

"L'tol?"

"Yes, a green rider from S'lel's wing. You remember."

An ill-timed swerve during the Spring Games had brought L'tol and his beast into the full blast of a phosphene emission from S'lel's bronze Tuenth. L'tol had been thrown from his beast's neck as the dragon tried to evade the blast. Another wingmate had swooped to catch the rider but the green dragon, his left wing crisped, his body scorched, had died of shock and phosphene poisoning.

"L'tol would aid our Search," F'nor agreed as the two dragonmen walked up to the bronze doors of the Clothmen's Hall. They paused on the threshold, adjusting their eyes to the dimmer light within. Glows punctuated the wall recesses and hung in clusters above the larger looms where the finer tapestries and fabrics were woven by master craftsmen. The pervading mood was one of quiet, purposeful industry.

Before their eyes had adapted, however, a figure glided to them, with a polite, if curt, request for them to follow him.

They were led to the right of the entrance, to a small office, curtained from the main hall. Their guide turned to them, his face visible in the wallglows. There was that air about him that marked him indefinably as a dragonman. But his face was lined deeply, one side seamed with old burnmarks. His eyes, sick with a hungry yearning, dominated his face. He blinked constantly.

"I am now Lytol," he said in a harsh voice.

F'lar nodded acknowledgment.

"You would be F'lar," Lytol said, "and you, F'nor. You've both the look of your sire."

F'lar nodded again.

Lytol swallowed convulsively, the muscles in his face twitching as the presence of dragonmen revived his awareness of exile. He essayed a smile.

"Dragons in the sky! The news spread faster than Threads."

"Nemorth has a new queen."

"Jora dead?" Lytol asked concernedly, his face cleared of its nervous movement for a second.

F'lar nodded.

Lytol grimaced bitterly. "R'gul again, huh." He stared off in the middle distance, his eyelids quiet but the muscles along his jaw took up the constant movement. "You've the High Reaches? All of them?" Lytol asked, turning back to the dragonman, a slight emphasis on "all."

F'lar gave an affirmative nod again.

"You've seen the women." Lytol's disgust showed through the words. It was a statement, not a question, for he hurried on. "Well, there are no better in all the High

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Reaches," and his tone expressed utmost disdain.

"Fax likes his women comfortably fleshed and docile," Lytol rattled on. "Even the Lady Gemma has learned. It'd be different if he didn't need her family's support. Ah, it would be different indeed. So he keeps her pregnant, hoping to kill her in childbed one day. And he will. He will."

Lytol drew himself up, squaring his shoulders, turning full to the two dragonmen. His expression was vindictive, his voice low and tense.

"Kill that tyrant, for the sake and safety of Pern. Of the Weyr. Of the queen. He only bides his time. He spreads discontent among the other lords. He"—Lytol's laughter had an hysterical edge to it now —"he fancies himself as good as dragonmen."

"There are no candidates then in this Hold?" F'lar said, his voice sharp enough to cut through the man's preoccupation with his curious theory.

Lytol stared at the bronze rider. "Did I not say it?"

"What of Ruath Hold?"

Lytol stopped shaking his head and looked sharply at F'lar, his lips curling in a cunning smile. He laughed mirthlessly.

"You think to find a Torene, or a Moreta, hidden at Ruath Hold in these times? Well, all of that Blood are dead. Fax's blade was thirsty that day. He knew the truth of those harpers' tales, that Ruathan lords gave full measure of hospitality to dragonmen and the Ruathan were a breed apart. There were, you know," Lytol's voice dropped to a confiding whisper, "exiled Weyrmen like myself in that Line."

F'lar nodded gravely, unable to contradict the man's pitiful attempt at self-esteem.

"No," and Lytol chuckled softly. "Fax gets nothing from that Hold but trouble. And the women Fax used to take . . ." his laugh turned nasty in tone. "It is rumored he was impotent for months afterwards."

"Any families in the holdings with Weyr blood?"

Lytol frowned, glanced surprised at F'lar. He rubbed the scarred side of his face thoughtfully.

"There were," he admitted slowly. "There were. But I doubt if any live on." He thought a moment longer, then shook his head emphatically.

F'lar shrugged.

"I wish I had better news for you," Lytol murmured.

"No matter," F'lar reassured him, one hand poised to part the hanging in the doorway.

Lytol came up to him swiftly, his voice urgent.

"Heed what I say, Fax is ambitious. Force R'gul, or whoever is Weyrleader next, to keep watch on the High Reaches."

Lytol jabbed a finger in the direction of the Hold. "He scoffs openly at tales of the Threads. He taunts

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the harpers for the stupid nonsense of the old ballads and has banned from their repertoire all dragonlore. The new generation will grow up totally ignorant of duty, tradition and precaution."

F'lar was not surprised to hear that on top of Lytol's other disclosures. Yet the Red Star pulsed in the sky and the time was drawing near when they would hysterically reavow the old allegiances in fear for their very lives.

"Have you been abroad in the early morning of late?" asked F'nor, grinning maliciously.

"I have," Lytol breathed out in a hushed, choked whisper. "I have . . ." A groan was wrenched from his guts and he whirled away from the dragonmen, his head bowed between hunched shoulders. "Go," he said, gritting his teeth. And, as they hesitated, he pleaded, *"Go!"*

F'lar walked quickly from the room, followed by F'nor. The bronze rider crossed the quiet dim Hall with long strides and exploded into the startling sunlight. His momentum took him into the center of the square. There he stopped so abruptly that F'nor, hard on his heels, nearly collided with him.

"We will spend exactly the same time within the other Halls," he announced in a tight voice, his face averted from F'nor's eyes. F'lar's throat was constricted. It was difficult, suddenly, for him to speak. He swallowed hard, several times.

"To be dragonless . . ." murmured F'nor, pityingly. The encounter with Lytol had roiled his depths in a mournful way to which he was unaccustomed. That F'lar appeared equally shaken went far to dispel F'nor's private opinion that his half-brother was incapable of emotion.

"There is no other way once First Impression has been made. You know that," F'lar roused himself to say curtly. He strode off to the Hall bearing the Leathermen's device.

The Hold is barred
The Hall is bare.
And men vanish.
The soil is barren,
The rock is bald.
All hope banish.

Lessa was shoveling ashes from the hearth when the agitated messenger staggered into the Great Hall. She made herself as inconspicuous as possible so the Warder would not dismiss her. She had contrived to be sent to the Great Hall that morning, knowing that the Warder intended to brutalize the Head Clothman for the shoddy quality of the goods readied for shipment to Fax.

"Fax is coming! With dragonmen!" the man gasped out as he plunged into the dim Great Hall.

The Warder, who had been about to lash the Head Clothman, turned, stunned, from his victim. The courier, a farmholder from the edge of

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Ruatha, stumbled up to the Warder, so excited with his message that he grabbed the Warder's arm.

"How dare you leave your Hold?" and the Warder aimed his lash at the astonished holder. The force of the first blow knocked the man from his feet. Yelping, he scrambled out of reach of a second lashing. "Dragonmen indeed! Fax? Ha! He shuns Ruatha. There!" The Warder punctuated each denial with another blow, kicking the helpless wretch for good measure, before he turned breathless to glare at the clothman and the two underwarders. "How did he get in here with such a threadbare lie?" The Warder stalked to the great door. It was flung open just as he reached out for the iron handle. The ashen-faced guard officer rushed in, nearly toppling the Warder.

"Dragonmen! Dragons! All over Ruatha!" the man gibbered, arms flailing wildly. He, too, pulled at the Warder's arm, dragging the stupefied official towards the outer courtyard, to bear out the truth of his statement.

Lessa scooped up the last pile of ashes. Picking up her equipment, she slipped out of the Great Hall. There was a very pleased smile on her face under the screen of matted hair.

A dragonman at Ruatha! She must somehow contrive to get Fax so humiliated, or so infuriated, that he would renounce his claim to the Hold, in the presence of a dragonman. Then she could claim her birthright.

But she would have to be extraordinarily wary. Dragonriders were men apart. Anger did not cloud their intelligence. Greed did not sully their judgment. Fear did not dull their reactions. Let the dense-witted believe human sacrifice, unnatural lusts, insane revel. She was not so gullible. And those stories went against her grain. Dragonmen were still human and there was Weyr blood in *her* veins. It was the same color as that of anyone else; enough of hers had been spilled to prove that.

She halted for a moment, catching a sudden shallow breath. Was this the danger she had sensed four days ago at dawn? The final encounter in her struggle to regain the Hold? No—there had been more to that portent than revenge.

The ash bucket banged against her shins as she shuffled down the low ceilinged corridor to the stable door. Fax would find a cold welcome. She had laid no new fire on the hearth. Her laugh echoed back unpleasantly from the damp walls. She rested her bucket and propped her broom and shovel as she wrestled with the heavy bronze door that gave into the new stables.

They had been built outside the cliff of Ruatha by Fax's first Warder, a subtler man than all eight of his successors. He had achieved more than all the others and Lessa

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had honestly regretted the necessity of his death. But he would have made her revenge impossible. He would have caught her out before she had learned how to camouflage herself and her little interferences. What had his name been? She could not recall. Well, she regretted his death.

The second man had been properly greedy and it had been easy to set up a pattern of misunderstanding between Warder and craftsmen. That one had been determined to squeeze all profit from Ruathan goods so that some of it would drop into his pocket before Fax suspected a shortage. The craftsmen who had begun to accept the skillful diplomacy of the first Warder bitterly resented the second's grasping, high-handed ways. They resented the passing of the Old Line and, even more so, the way of its passing. They were unforgiving of the insult to Ruatha; its now secondary position in the High Reaches; and they resented the individual indignities that holders, craftsmen and farmers alike, suffered under the second Warder. It took little manipulation to arrange for matters at Ruatha to go from bad to worse.

The second was replaced and his successor fared no better. He was caught diverting goods, the best of the goods at that. Fax had had him executed. His bony head still hung in the main firepit above the great Tower.

The present incumbent had not been able to maintain the Hold in even the sorry condition in which he had assumed its management. Seemingly simple matters developed rapidly into disasters. Like the production of cloth . . . Contrary to his boasts to Fax, the quality had not improved, and the quantity had fallen off.

Now Fax was here. And with dragonmen! Why dragonmen? The import of the question froze Lessa, and the heavy door closing behind her barked her heels painfully. Dragonmen used to be frequent visitors at Ruatha, that she knew, and even vaguely remembered. Those memories were like a harper's tale, told of someone else, not something within her own experience. She had limited her fierce attention to Ruatha only. She could not even recall the name of Queen or Weyrwoman from the instructions of her childhood, nor could she recall hearing mention of any queen or weyrwoman by anyone in the Hold these past ten Turns.

Perhaps the dragonmen were finally going to call the lords of the Holds to task for the disgraceful show of greenery about the Holds. Well, Lessa was to blame for much of that in Ruatha but she defied even a dragonman to confront her with her guilt. Did all Ruatha fall to the Threads it would be better than remaining dependent to Fax! The heresy shocked Lessa even as she thought it.

Wishing she could as easily un-

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burden her conscience of such blasphemy, she ditched the ashes on the stable midden. There was a sudden change in air pressure around her. Then a fleeting shadow caused her to glance up.

From behind the cliff above glided a dragon, its enormous wings spread to their fullest as he caught the morning updraft. Turning effortlessly, he descended. A second, a third, a full wing of dragons followed in soundless flight and patterned descent, graceful and awesome. The claxon rang belatedly from the Tower and from within the kitchen there issued the screams and shrieks of the terrified drudges.

Lessa took cover. She ducked into the kitchen where she was instantly seized by the assistant cook and thrust with a buffet and a kick toward the sinks. There she was put to scrubbing grease-encrusted serving bowls with cleansing sand.

The yelping canines were already lashed to the spitrun, turning a scrawny herdbeast that had been set to roast. The cook was ladling seasonings on the carcass, swearing at having to offer so poor a meal to so many guests, and some of them high-rank. Winter-dried fruits from the last scanty harvest had been set to soak and two of the oldest drudges were scraping roots.

An apprentice cook was kneading bread; another, carefully spicing a sauce. Looking fixedly at him, she diverted his hand from one spice box to a less appropriate one as he gave a final shake to the concoction. She added too much wood to the wall oven, insuring ruin for the breads. She controlled the canines deftly, slowing one and speeding the other so that the meat would be underdone on one side, burned on the other. That the feast should be a fast, the food presented found inedible, was her whole intention.

Above in the Hold, she had no doubt that certain other measures, undertaken at different times for this exact contingency, were being discovered.

Her fingers bloodied from a beating, one of the Warder's women came shrieking into the kitchen, hopeful of refuge there.

"Insects have eaten the best blankets to shreds! And a canine who had littered on the best linens snarled at me as she gave suck! And the rushes are noxious, the best chambers full of debris driven in by the winter wind. Somebody left the shutters ajar. Just a tiny bit, but it was enough . . ." the woman wailed, clutching her hand to her breast and rocking back and forth.

Lessa bent with great industry to shine the plates.

Watch-wher, watch-wher,
In your lair,
Watch well, watch-wher!
Who goes there?

"The watch-wher is hiding something," F'lar told F'nor as they consulted in the hastily cleaned Great Hall. The room delighted to hold

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the wintry chill although a generous fire now burned on the hearth.

"It was but gibbering when Canth spoke to it," F'nor remarked. He was leaning against the mantel, turning slightly from side to side to gather some warmth. He watched his wingleader's impatient pacing.

"Mnementh is calming it down," F'lar replied. "He may be able to sort out the nightmare. The creature may be more senile than aware, but . . ."

"I doubt it," F'nor concurred helpfully. He glanced with apprehension up at the webhung ceiling. He was certain he'd found most of the crawlers, but he didn't fancy their sting. Not on top of the discomforts already experienced in this forsaken Hold. If the night stayed mild, he intended curling up with Canth on the heights."That would be more reasonable than anything Fax or his Warder have suggested."

"Hm-m-m," F'lar muttered, frowning at the brown rider.

"Well, it's unbelievable that Ruatha could have fallen to such disrepair in ten short Turns. Every dragon caught the feeling of power and it's obvious the watch-wher has been tampered with. That takes a good deal of control."

"From someone of the Blood," F'lar reminded him.

F'nor shot his wingleader a quick look, wondering if he could possibly be serious in the light of all information to the contrary.

"I grant you there is power here, F'lar," F'nor conceded. "It could easily be a hidden male of the old Blood. But we need a female. And Fax made it plain, in his inimitable fashion, that he left none of the old Blood alive in the Hold the day he took it. No, no." The brown rider shook his head, as if he could dispel the lack of faith in his wingleader's curious insistence that the Search would end in Ruath with Ruathan blood.

"That watch-wher is hiding something and only someone of the Blood of its Hold can arrange that," F'lar said emphatically. He gestured around the Hall and towards the walls, bare of hangings. "Ruatha has been overcome. But she resists . . . Subtly. I say it points to the old Blood, *and* power. Not power alone."

The obstinate expression in F'lar's eyes, the set of his jaw, suggested that F'nor seek another topic.

"The pattern was well-flown today," F'nor suggested tentatively. "Does a dragonman good to ride a flaming beast. Does the beast good, too. Keeps the digestive process in order."

F'lar nodded sober agreement. "Let R'gul temporize as he chooses. It is fitting and proper to ride a fire-spouting beast and these holders need to be reminded of Weyr power."

"Right now, anything would help our prestige," F'nor commented sourly. "What had Fax to say when

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he hailed you in the Pass?" F'nor knew his question was almost impertinent but if it were, F'lar would ignore it.

F'lar's slight smile was unpleasant and there was an ominous glint in his amber eyes.

"We talked of rule and resistance."

"Did he not also draw on you?" F'nor asked.

F'lar's smile deepened. "Until he remembered I was dragon-mounted."

"He's considered a vicious fighter," F'nor said.

"I am at some disadvantage?" F'lar asked, turning sharply on his brown rider, his face too controlled.

"To my knowledge, no," F'nor reassured his leader quickly. F'lar had tumbled every man in the Weyr, efficiently and easily. "But Fax kills often and without cause."

"And because we dragonmen do not seek blood, we are not to be feared as fighters?" snapped F'lar. "Are you ashamed of your heritage?"

"I? No!" F'nor sucked in his breath. "Nor any of our wing!" he added proudly. "But there is that in the attitude of the men in this progression of Fax's that . . . that makes me wish some excuse to fight."

"As you observed today, Fax seeks some excuse. And," F'lar added thoughtfully, "there is something here in Ruatha that unnerves our noble overlord."

He caught sight of Lady Tela, whom Fax had so courteously assigned him for comfort during the progression, waving to him from the inner Hold portal.

"A case in point. Fax's Lady Tela is some three months gone."

F'nor frowned at that insult to his leader.

"She giggles incessantly and appears so addlepated that one cannot decide whether she babbles out of ignorance or at Fax's suggestion. As she has apparently not bathed all winter, and is not, in any case, my ideal, I have"—F'lar grinned maliciously—"deprived myself of her kind offices."

F'nor hastily cleared his throat and his expression as Lady Tela approached them. He caught the unappealing odor from the scarf or handkerchief she waved constantly. Dragonmen endured a great deal for the Weyr. He moved away, with apparent courtesy, to join the rest of the dragonmen entering the Hall.

F'lar turned with equal courtesy to Lady Tela as she jabbered away about the terrible condition of the rooms which Lady Gemma and the other ladies had been assigned.

"The shutters, both sets, were ajar all winter long and you should have seen the trash on the floors. We finally got two of the drudges to sweep it all into the fireplace. And then that smoked something fearful 'til a man was sent up." Lady

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Tela giggled. "He found the access blocked by a chimney stone fallen aslant. The rest of the chimney, for a wonder, was in good repair."

She waved her handkerchief. F'lar held his breath as the gesture wafted an unappealing odor in his direction.

He glanced up the Hall towards the inner Hold door and saw Lady Gemma descending, her steps slow and awkward. Some subtle difference about her gait attracted him and he stared at her, trying to identify it.

"Oh, yes, poor Lady Gemma," Lady Tela babbled, sighing deeply. "We are so concerned. Why Lord Fax insisted on her coming, I do not know. She is not near her time and yet . . ." The lighthead's concern sounded sincere.

F'lar's incipient hatred for Fax and his brutality matured abruptly. He left his partner chattering to thin air and courteously extended his arm to Lady Gemma to support her down the steps and to the table. Only the brief tightening of her fingers on his forearm betrayed her gratitude. Her face was very white and drawn, the lines deeply etched around mouth and eyes, showing the effort she was expending.

"Some attempt has been made, I see, to restore order to the Hall," she remarked in a conversational tone.

"Some," F'lar admitted dryly, glancing around the grandly proportioned Hall, its rafter festooned with the webs of many Turns. The inhabitants of those gossamer nests dropped from time to time, with ripe splats, to the floor, onto the table and into the serving platters. Nothing replaced the old banners of the Ruathan Blood, which had been removed from the stark brown stone walls. Fresh rushes did obscure the greasy flagstones. The trestle tables appeared recently sanded and scraped, and the platters gleamed dully in the refreshed glows. Unfortunately, the brighter light was a mistake for it was much too unflattering.

"This was such a graceful Hall," Lady Gemma murmured for F'lar's ears alone.

"You were a friend?" he asked, politely.

"Yes, in my youth," her voice dropped expressively on the last word, evoking for F'lar a happier girlhood. "It was a noble line!"

"Think you *one* might have escaped the sword?"

Lady Gemma flashed him a startled look, then quickly composed her features, lest the exchange be noted. She gave a barely perceptible shake of her head and then shifted her awkward weight to take her place at the table. Graciously she inclined her head towards F'lar, both dismissing and thanking him.

F'lar returned to his own partner and placed her at the table on his left. As the only person of rank who would dine that night at Ruath Hold, Lady Gemma was seat-

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ed on his right; Fax would be beyond her. The dragonmen and Fax's upper soldiery would sit at the lower tables. No guildmen had been invited to Ruatha. Fax arrived just then with his current lady and two underleaders, the Warder bowing them effusively into the Hall. The man, F'lar noticed, kept a good distance from his overlord—as well a Warder might whose responsibility was in this sorry condition. F'lar flicked a crawler away. Out of the corner of his eye, he saw Lady Gemma wince and shudder.

Fax stamped up to the raised table, his face black with suppressed rage. He pulled back his chair roughly, slamming it into Lady Gemma's before he seated himself. He pulled the chair to the table with a force that threatened to rock the none too stable trestle-top from its supporting legs. Scowling, he inspected his goblet and plate, fingering the surface, ready to throw them aside if they displeased him.

"A roast and fresh bread, Lord Fax, and such fruits and roots as are left. Had I but known of your arrival, I could have sent to Crom for . . ."

"Sent to Crom?" roared Fax, slamming the plate he was inspecting onto the table so forcefully the rim bent under his hands. The Warder winced again as if he himself had been maimed.

"The day one of my Holds cannot support itself *or* the visit of its rightful overlord, I shall renounce it."

Lady Gemma gasped. Simultaneously the dragons roared. F'lar felt the unmistakable surge of power. His eyes instinctively sought F'nor at the lower table. The brown rider —all the dragonmen—had experienced that inexplicable shaft of exultation.

"What's wrong, Dragonman?" snapped Fax.

F'lar, affecting unconcern, stretched his legs under the table and assumed an indolent posture in the heavy chair.

"Wrong?"

"The dragons!"

"Oh, nothing. They often roar . . . at the sunset, at a flock of passing wherries, at mealtimes," and F'lar smiled amiably at the Lord of the High Reaches. Beside him his tablemate gave a squeak.

"Mealtimes? Have they not been fed?"

"Oh, yes. Five days ago."

"Oh. Five . . . days ago? And are they hungry . . . now?" Her voice trailed into a whisper of fear, her eyes grew round.

"In a few days," F'lar assured her. Under cover of his detached amusement, F'lar scanned the Hall. That surge had come from nearby. Either in the Hall or just outside. It must have been from within. It came so soon upon Fax's speech that his words must have triggered it. And the power had had an indefinably feminine touch to it.

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One of Fax's women? F'lar found that hard to credit. Mnementh had been close to all of them and none had shown a vestige of power. Much less, with the exception of Lady Gemma, any intelligence.

One of the Hall women? So far he had seen only the sorry drudges and the aging females the Warder had as housekeepers. The Warder's personal woman? He must discover if that man had one. One of the Hold guards' women? F'lar suppressed an intense desire to rise and search.

"You mount a guard?" he asked Fax casually.

"Double at Ruath Hold!" he was told in a tight, hard voice, ground out from somewhere deep in Fax's chest.

"Here?" F'lar all but laughed out loud, gesturing around the sadly appointed chamber.

"Here! Food!" Fax changed the subject with a roar.

Five drudges, two of them women in brown-gray rags such that F'lar hoped they had had nothing to do with the preparation of the meal, staggered in under the emplattered herdbeast. No one with so much as a trace of power would sink to such depths, unless . . .

The aroma that reached him as the platter was placed on the serving table distracted him. It reeked of singed bone and charred meat. The Warder frantically sharpened his tools as if a keen edge could somehow slice acceptable portions from this unlikely carcass.

Lady Gemma caught her breath again and F'lar saw her hands curl tightly around the armrests. He saw the convulsive movement of her throat as she swallowed. He, too, did not look forward to this repast.

The drudges reappeared with wooden trays of bread. Burnt crusts had been scraped and cut, in some places, from the loaves before serving. As other trays were borne in, F'lar tried to catch sight of the faces of the servitors. Matted hair obscured the face of the one who presented a dish of legumes swimming in greasy liquid. Revolted, F'lar poked through the legumes to find properly cooked portions to offer Lady Gemma. She waved them aside, her face ill-concealing her discomfort.

As F'lar was about to turn and serve Lady Tela, he saw Lady Gemma's hand clutch convulsively at the chair arms. He realized that she was not merely nauseated by the unappetizing food. She was seized with labor contractions.

F'lar glanced in Fax's direction. The overlord was scowling blackly at the attempts of the Warder to find edible portions of meat to serve.

F'lar touched Lady Gemma's arm with light fingers. She turned just enough to look at F'lar from the corner of her eye. She managed a socially-correct half-smile.

"I dare not leave just now, Lord F'lar. He is always dangerous at

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Ruatha. And it may only be false pangs."

F'lar was dubious as he saw another shudder pass through her frame. The woman would have been a fine weyrwoman, he thought ruefully, were she but younger.

The Warder, his hands shaking, presented Fax the sliced meats. There were slivers of overdone flesh and portions of almost edible meats, but not much of either.

One furious wave of Fax's broad fist and the Warder had the plate, meats and juice, square in the face. Despite himself, F'lar sighed, for those undoubtedly constituted the only edible portions of the entire beast.

"You call this food? *You call this food?"* Fax bellowed. His voice boomed back from the bare vault of the ceiling, shaking crawlers from their webs as the sound shattered the fragile strands. "Slop! *Slop!"*

F'lar rapidly brushed crawlers from Lady Gemma who was helpless in the throes of a very strong contraction.

"It's all we had on such short notice," the Warder squealed, juices streaking down his cheeks. Fax threw the goblet at him and the wine went streaming down the man's chest. The steaming dish of roots followed and the man yelped as the hot liquid splashed over him.

"My lord, my lord, had I but known!"

"Obviously, Ruatha *cannot* support the visit of its Lord. You must renounce it," F'lar heard himself saying.

His shock at such words issuing from his mouth was as great as that of everyone else in the Hall. Silence fell, broken by the splat of falling crawlers and the drip of root liquid from the Warder's shoulders to the rushes. The grating of Fax's boot-heel was clearly audible as he swung slowly around to face the bronze rider.

As F'lar conquered his own amazement and rapidly tried to predict what to do next to mend matters, he saw F'nor rise slowly to his feet, hand on dagger hilt.

"I did not hear you correctly?" Fax asked, his face blank of all expression, his eyes snapping.

Unable to comprehend how he could have uttered such an arrant challenge, F'lar managed to assume a languid pose.

"You did mention," he drawled, "that if any of your Holds could not support itself and the visit of its rightful overlord, you would renounce it."

Fax stared back at F'lar, his face a study of swiftly suppressed emotions, the glint of triumph dominant. F'lar, his face stiff with the forced expression of indifference, was casting swiftly about in his mind. In the name of the Egg, had he lost all sense of discretion?

Pretending utter unconcern, he stabbed some vegetables onto his knife and began to munch on them.

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As he did so, he noticed F'nor glancing slowly around the Hall, scrutinizing everyone. Abruptly F'lar realized what had happened. Somehow, in making that statement, he, a dragonman, had responded to a covert use of the power. F'lar, the bronze rider, was being put into a position where he would *have* to fight Fax. Why? For what end? To get Fax to renounce the Hold? Incredible! But, there could be only one possible reason for such a turn of events. An exultation as sharp as pain swelled within F'lar. It was all he could do to maintain his pose of bored indifference, all he could do to turn his attention to thwarting Fax, should he press for a duel. A duel would serve no purpose. He, F'lar, had no time to waste on it.

A groan escaped Lady Gemma and broke the eye-locked stance of the two antagonists. Irritated, Fax looked down at her, fist clenched and half-raised to strike her for her temerity in interrupting her lord and master. The contraction that contorted the swollen belly was as obvious as the woman's pain. F'lar dared not look towards her but he wondered if she had deliberately groaned aloud to break the tension.

Incredibly, Fax began to laugh. He threw back his head, showing big, stained teeth, and roared.

"Aye, renounce it, in favor of her issue, if it is male . . . and lives!" he crowed, laughing raucously.

"Heard and witnessed!" F'lar snapped, jumping to his feet and pointing to his riders. They were on their feet in the instant. "Heard and witnessed!" they averred in the traditional manner.

With that movement, everyone began to babble at once in nervous relief. The other women, each reacting in her way to the imminence of birth, called orders to the servants and advice to each other. They converged towards Lady Gemma, hovering undecidedly out of Fax's range, like silly wherries disturbed from their roosts. It was obvious they were torn between their fear of their lord and their desire to reach the laboring woman.

He gathered their intentions as as well as their reluctance and, still stridently laughing, knocked back his chair. He stepped over it, strode down to the meatstand and stood hacking off pieces with his knife, stuffing them, juice dripping, into his mouth without ceasing his guffawing.

As F'lar bent towards Lady Gemma to assist her out of her chair, she grabbed his arm urgently. Their eyes met, hers clouded with pain. She pulled him closer.

"He means to kill you, Bronze Rider. He loves to kill," she whispered.

"Dragonmen are not easily killed, but I am grateful to you."

"I do not want you killed," she said, softly, biting at her lip. "We have so few bronze riders."

F'lar stared at her, startled. Did

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she, Fax's lady, actually believe in the Old Laws?

F'lar beckoned to two of the Warder's men to carry her up into the Hold. He caught Lady Tela by the arm as she fluttered past him.

"What do you need?"

"Oh, oh," she exclaimed, her face twisted with panic; she was distractedly wringing her hands, "Water, hot. Clean cloths. And a birthing-woman. Oh, yes, we must have a birthing-woman."

F'lar looked about for one of the Hold women, his glance sliding over the first disreputable figure who had started to mop up the spilled food. He signaled instead for the Warder and peremptorily ordered him to send for the woman. The Warder kicked at the drudge on the floor.

"You . . . you! Whatever your name is, go get her from the crafthold. You must know who she is."

The drudge evaded the parting kick the Warder aimed in her direction with a nimbleness at odds with her appearance of extreme age and decrepitude. She scurried across the Hall and out the kitchen door.

Fax sliced and speared meat, occasionally bursting out with a louder bark of laughter as his inner thoughts amused him. F'lar sauntered down to the carcass and, without waiting for invitation from his host, began to carve neat slices also, beckoning his men over. Fax's soldiers, however, waited until their lord had eaten his fill.

Lord of the Hold, your charge
is sure
In thick walls, metal doors and
no verdure.

Lessa sped from the Hall to summon the birthing-woman, seething with frustration. So close! So close! How could she come so close and yet fail? Fax should have challenged the dragonman. And the dragonman was strong and young, his face that of a fighter, stern and controlled. He should not have temporized. Was all honor dead in Pern, smothered by green grass?

And why, oh why, had Lady Gemma chosen that precious moment to go into labor? If her groan hadn't distracted Fax, the fight would have begun and not even Fax, for all his vaunted prowess as a vicious fighter, would have prevailed against a dragonman who had her—Lessa's—support! The Hold must be secured to its rightful Blood again. Fax must not leave Ruatha, alive, again!

Above her, on the High Tower, the great bronze dragon gave forth a weird croon, his many-faceted eyes sparkling in the gathering darkness.

Unconsciously she silenced him as she would have done the watch-wher. Ah, that watch-wher. He had not come out of his den at her passing. She knew the dragons had been at him. She could hear him gibbering in panic.

The slant of the road toward the crafthold lent impetus to her flying

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feet and she had to brace herself to a sliding stop at the birthing-woman's stone threshold. She banged on the closed door and heard the frightened exclamation within.

"A birth. A birth at the Hold," Lessa cried.

"A birth?" came the muffled cry and the latches were thrown up on the door. "At the Hold?"

"Fax's lady and, as you love life, hurry! For if it is male, it will be Ruatha's own lord."

That ought to fetch her, thought Lessa, and in that instant, the door was flung open by the man of the house. Lessa could see the birthing-woman gathering up her things in haste, piling them into her shawl. Lessa hurried the woman out, up the steep road to the Hold, under the Tower gate, grabbing the woman as she tried to run at the sight of a dragon peering down at her. Lessa drew her into the Court and pushed her, resisting, into the Hall.

The woman clutched at the inner door, balking at the sight of the gathering there. Lord Fax, his feet up on the trestle table, was paring his fingernails with his knife blade, still chuckling. The dragonmen in their wher-hide tunics, were eating quietly at one table while the soldiers were having their turn at the meat.

The bronze rider noticed their entrance and pointed urgently towards the inner Hold. The birthing-woman seemed frozen to the spot. Lessa tugged futilely at her arm, urging her to cross the Hall. To her surprise, the bronze rider strode to them.

"Go quickly, woman, Lady Gemma is before her time," he said, frowning with concern, gesturing imperatively towards the Hold entrance. He caught her by the shoulder and led her, all unwilling, Lessa tugging away at her other arm.

When they reached the stairs, he relinquished his grip, nodding to Lessa to escort her the rest of the way. Just as they reached the massive inner door, Lessa noticed how sharply the dragonman was looking at them—at her hand, on the birthing-woman's arm. Warily, she glanced at her hand and saw it, as if it belonged to a stranger: the long fingers, shapely despite dirt and broken nails; her small hand, delicately boned, gracefully placed despite the urgency of the grip. She blurred it and hurried on.

Honor those the dragons heed,
In thought and favor, word and deed.
Worlds are lost or worlds are saved
By those dangers dragon-braved.

Dragonman, avoid excess;
Greed will bring the Weyr distress;
To the ancient Laws adhere,
Prospers thus the Dragonweyr.
An unintelligible ululation raised

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the waiting men to their feet, startled from private meditations and the diversion of Bonethrows. Only Fax remained unmoved at the alarm, save that the slight sneer, which had settled on his face hours past, deepened to smug satisfaction.

"Dead-ed-ed," the tidings reverberated down the rocky corridors of the Hold. The weeping lady seemed to erupt out of the passage from the Inner Hold, flying down the steps to sink into an hysterical heap at Fax's feet. "She's dead. Lady Gemma is dead. There was too much blood. It was too soon. She was too old to bear more children."

F'lar couldn't decide whether the woman was apologizing for, or exulting in, the woman's death. She certainly couldn't be criticizing her Lord for placing Lady Gemma in such peril. F'lar, however, was sincerely sorry at Gemma's passing. She had been a brave, fine woman.

And now, what would be Fax's next move? F'lar caught F'nor's identically quizzical glance and shrugged expressively.

"The child lives!" a curiously distorted voice announced, penetrating the rising noise in the Great Hall. The words electrified the atmosphere. Every head slewed round sharply towards the portal to the Inner Hold where the drudge, a totally unexpected messenger, stood poised on the top step.

"It is male!" This announcement rang triumphantly in the still Hall.

Fax jerked himself to his feet, kicking aside the wailer at his feet, scowling ominously at the drudge. "What did you say, woman?"

"The child lives. It is male," the creature repeated, descending the stairs.

Incredulity and rage suffused Fax's face. His body seemed to coil up.

"Ruatha has a new lord!" Staring intently at the overlord, she advanced, her mien purposeful, almost menacing.

The tentative cheers of the Warder's men were drowned by the roaring of the dragons.

Fax erupted into action. He leaped across the intervening space, bellowing. Before Lessa could dodge, his fist crashed down across her face. She fell heavily to the stone floor, where she lay motionless, a bundle of dirty rags.

"Hold, Fax!" F'lar's voice broke the silence as the Lord of the High Reaches flexed his leg to kick her.

Fax whirled, his hand automatically closing on his knife hilt.

"It was heard and witnessed, Fax," F'lar cautioned him, one hand outstretched in warning, "by dragonmen. Stand by your sworn and witnessed oath!"

"Witnessed? By dragonmen?" cried Fax with a derisive laugh. "Dragonwomen, you mean," he sneered, his eyes blazing with contempt, as he made one sweeping gesture of scorn.

He was momentarily taken aback by the speed with which the bronze

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rider's knife appeared in his hand.

"Dragonwomen?" F'lar queried, his lips curling back over his teeth, his voice dangerously soft. Glowlight flickered off his circling knife as he advanced on Fax.

"Women! Parasites on Pern. The Weyr power is over. Over!" Fax roared, leaping forward to land in a combat crouch.

The two antagonists were dimly aware of the scurry behind them, of tables pulled roughly aside to give the duelists space. F'lar could spare no glance at the crumpled form of the drudge. Yet he was sure, through and beyond instinct sure, that she was the source of power. He had felt it as she entered the room. The dragons' roaring confirmed it. If that fall had killed her . . . He advanced on Fax, leaping high to avoid the slashing blade as Fax unwound from the crouch with a powerful lunge.

F'lar evaded the attack easily, noticing his opponent's reach, deciding he had a slight advantage there. But not much. Fax had had much more actual hand-to-hand killing experience than had he whose duels had always ended at first blood on the practice floor. F'lar made due note to avoid closing with the burly lord. The man was heavy-chested, dangerous from sheer mass. F'lar must use agility as his weapon, not brute strength.

Fax feinted, testing F'lar for weakness, or indiscretion. The two crouched, facing each other across six feet of space, knife hands weaving, their free hands, spread-fingered, ready to grab.

Again Fax pressed the attack. F'lar allowed him to close, just near enough to dodge away with a backhanded swipe. Fabric ripped under the tip of his knife. He heard Fax snarl. The overlord was faster on his feet than his bulk suggested and F'lar had to dodge a second time, feeling Fax's knife score his wherhide jerkin.

Grimly the two circled, each looking for an opening in the other's defense. Fax plowed in, trying to corner the lighter, faster man between raised platform and wall.

F'lar countered, ducking low under Fax's flailing arm, slashing obliquely across Fax's side. The overlord caught at him, yanking savagely, and F'lar was trapped against the other man's side, straining desperately with his left hand to keep the knife arm up. F'lar brought up his knee, and ducked away as Fax gasped and buckled from the pain in his groin, but Fax struck in passing. Sudden fire laced F'lar's left shoulder.

Fax's face was red with anger and he wheezed from pain and shock. But the infuriated lord straightened up and charged. F'lar was forced to sidestep quickly before Fax could close with him. F'lar put the meat table between them, circling warily, flexing his shoulder to assess the extent of the knife's

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slash. It was painful, but the arm could be used.

Suddenly Fax scooped up some fatty scraps from the meat tray and hurled them at F'lar. The dragonman ducked and Fax came around the table with a rush. F'lar leaped sideways. Fax's flashing blade came within inches of his abdomen, as his own knife sliced down the outside of Fax's arm. Instantly the two pivoted to face each other again, but Fax's left arm hung limply at his side.

F'lar darted in, pressing his luck as the Lord of the High Reaches staggered. But F'lar misjudged the man's condition and suffered a terrific kick in the side as he tried to dodge under the feinting knife. Doubled with pain, F'lar rolled frantically away from his charging adversary. Fax was lurching forward, trying to fall on him, to pin the lighter dragonman down for a final thrust. Somehow F'lar got to his feet, attempting to straighten to meet Fax's stumbling charge. His very position saved him. Fax overreached his mark and staggered off balance. F'lar brought his right hand over with as much strength as he could muster and his blade plunged through Fax's unprotected back until he felt the point stick in the chest plate.

The defeated lord fell flat to the flagstones. The force of his descent dislodged the dagger from his chestbone and an inch of bloody blade re-emerged.

F'lar stared down at the dead man. There was no pleasure in killing, he realized, only relief that he himself was still alive. He wiped his forehead on his sleeve and forced himself erect, his side throbbing with the pain of that last kick and his left shoulder burning. He half-stumbled to the drudge, still sprawled where she had fallen.

He gently turned her over, noting the terrible bruise spreading across her cheek under the dirty skin. He heard F'nor take command of the tumult in the Hall.

The dragonman laid a hand, trembling in spite of an effort to control himself, on the woman's breast to feel for a heartbeat . . . It was there, slow but strong.

A deep sigh escaped him for either blow or fall could have proved fatal. Fatal, perhaps, for Pern as well.

Relief was colored with disgust. There was no telling under the filth how old this creature might be. He raised her in his arms, her light body no burden even to his battle-weary strength. Knowing F'nor would handle any trouble efficiently, F'lar carried the drudge to his own chamber.

Putting the body on the high bed, he stirred up the fire and added more glows to the bedside bracket. His gorge rose at the thought of touching the filthy mat of hair but nonetheless and gently, he pushed it back from the face, turning the head this way and that. The features were

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small, regular. One arm, clear of rags, was reasonably clean above the elbow but marred by bruises and old scars. The skin was firm and unwrinkled. The hands, when he took them in his, were filthy but well-shaped and delicately boned.

F'lar began to smile. Yes, she had blurred that hand so skillfully that he had actually doubted what he had first seen. And yes, beneath grime and grease, she was young. Young enough for the Weyr. And no born drab. There was no taint of common blood here. It was pure, no matter whose the line, and he rather thought she was indeed Ruathan. One who had by some unknown agency escaped the massacre ten Turns ago and bided her time for revenge. Why else force Fax to renounce the Hold?

Delighted and fascinated by this unexpected luck, F'lar reached out to tear the dress from the unconscious body and found himself constrained not to. The girl had roused. Her great, hungry eyes fastened on his, not fearful or expectant; wary.

A subtle change occurred in her face. F'lar watched, his smile deepening, as she shifted her regular features into an illusion of disagreeable ugliness and great age.

"Trying to confuse a dragonman, girl?" he chuckled. He made no further move to touch her but settled against the great carved post of the bed. He crossed his arms sternly on his chest, thought better of it immediately, and eased his sore arm.

"Your name, girl, and rank, too."

She drew herself upright slowly against the headboard, her features no longer blurred. They faced each other across the high bed.

"Fax?"

"Dead. Your name!"

A look of exulting triumph flooded her face. She slipped from the bed, standing unexpectedly tall. "Then I reclaim my own. I am of the Ruathan Blood. I claim Ruath," she announced in a ringing voice.

F'lar stared at her a moment, delighted with her proud bearing. Then he threw back his head and laughed.

"This? This crumbling heap?" He could not help but mock the disparity between her manner and her dress. "Oh, no. Besides, Lady, we dragonmen heard and witnessed Fax's oath renouncing the Hold in favor of his heir. Shall I challenge the babe, too, for you? And choke him with his swaddling cloths?"

Her eyes flashed, her lips parted in a terrible smile.

"There is no heir. Gemma died, the babe unborn. I lied."

"Lied?" F'lar demanded, angry.

"Yes," she taunted him with a toss of her chin. "I lied. There was no babe born. I merely wanted to be sure you challenged Fax."

He grabbed her wrist, stung that he had twice fallen to her prodding.

"You provoked a dragonman to fight? To kill? *When he is on Search?*"

"Search? Why should I care

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about a Search? I've Ruatha as my Hold again. For ten Turns, I have worked and waited, schemed and suffered for that. What could your Search mean to me?"

F'lar wanted to strike that look of haughty contempt from her face. He twisted her arm savagely, bringing her to his feet before he released his grip. She laughed at him, and scuttled to one side. She was on her feet and out the door before he could give chase.

Swearing to himself, he raced down the rocky corridors, knowing she would have to make for the Hall to get out of the Hold. However, when he reached the Hall, there was no sign of her fleeing figure among those still loitering.

"Has that creature come this way?" he called to F'nor who was, by chance, standing by the door to the Court.

"No. Is she the source of power after all?"

"Yes, she is," F'lar answered, galled all the more. "And Ruathan Blood at that!"

"Oh ho! Does she depose the babe, then?" F'nor asked, gesturing towards the birthing-woman who occupied a seat close to the now blazing hearth.

F'lar paused, about to return to search the Hold's myriad passages. He stared, momentarily confused, at this brown rider.

"Babe? What babe?"

"The male child Lady Gemma bore," F'nor replied, surprised by F'lar's uncomprehending look.

"It lives?"

"Yes. A strong babe, the woman says, for all that he was premature and taken forcibly from his dead dame's belly."

F'lar threw back his head with a shout of laughter. For all her scheming, she had been outdone by truth.

At that moment, he heard Mnementh roar in unmistakable elation and the curious warble of other dragons.

"Mnementh has caught her," F'lar cried, grinning with jubilation. He strode down the steps, past the body of the former Lord of the High Reaches and out into the main court.

He saw that the bronze dragon was gone from his Tower perch and called him. An agitation drew his eyes upward. He saw Mnementh spiraling down into the Court, his front paws clasping something. Mnementh informed F'lar that he had seen her climbing from one of the high windows and had simply plucked her from the ledge, knowing the dragonman sought her. The bronze dragon settled awkwardly onto his hind legs, his wings working to keep him balanced. Carefully he set the girl on her feet and formed a precise cage around her with his huge talons. She stood motionless within that circle, her face toward the wedge-shaped head that swayed above her.

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The watch-wher, shrieking terror, anger and hatred, was lunging violently to the end of its chain, trying to come to Lessa's aid. It grabbed at F'lar as he strode to the two.

"You've courage enough, girl," he admitted, resting one hand casually on Mnementh's upper claw. Mnementh was enormously pleased with himself and swiveled his head down for his eye ridges to be scratched.

"You did not lie, you know," F'lar said, unable to resist taunting the girl.

Slowly she turned towards him, her face impassive. She was not afraid of dragons, F'lar realized with approval.

"The babe lives. And it is male."

She could not control her dismay and her shoulders sagged briefly before she pulled herself erect.

"Ruatha is mine," she insisted in a tense low voice.

"Aye, and it would have been, had you approached me directly when the wing arrived here."

Her eyes widened. "What do you mean?"

"A dragonman may champion anyone whose grievance is just. By the time we reached Ruath Hold, I was quite ready to challenge Fax given any reasonable cause, despite the Search." This was not the whole truth but F'lar must teach this girl the folly of trying to control dragonmen. "Had you paid any attention to your harper's songs, you'd know your rights. And," F'lar's voice held a vindictive edge that surprised him, "Lady Gemma might not now lie dead. She suffered far more at that tyrant's hand than you."

Something in her manner told him that she regretted Lady Gemma's death, that it had affected her deeply.

"What good is Ruatha to you now?" he demanded, a broad sweep of his arm taking in the ruined court yard and the Hold, the entire unproductive valley of Ruatha. "You have indeed accomplished your ends; a profitless conquest and its conqueror's death." F'lar snorted: "All seven Holds will revert to their legitimate Blood, and time they did. One Hold, one lord. Of course, you might have to fight others, infected with Fax's greed. Could you hold Ruatha against attack . . . now . . . in her decline?"

"Ruatha is mine!"

"Ruatha?" F'lar's laugh was derisive. "When you could be Weyrwoman?"

"Weyrwoman?" she breathed, staring at him.

"Yes, little fool. I said I rode in Search . . . it's about time you attended to more than Ruatha. And the object of my Search is . . . you!"

She stared at the finger he pointed at her as if it were dangerous.

"By the First Egg, girl, you've power in you to spare when you can turn a dragonman, all unwitting, to do your bidding. Ah, but never again, for now I am on guard against you."

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Mnementh crooned approvingly, the sound a soft rumble in his throat. He arched his neck so that one eye was turned directly on the girl, gleaming in the darkness of the court.

F'lar noticed with detached pride that she neither flinched nor blanched at the proximity of an eye greater than her own head.

"He likes to have his eye ridges scratched," F'lar remarked in a friendly tone, changing tactics.

"I know," she said softly and reached out a hand to do that service.

"Nemorth's queen," F'lar continued, "is close to death. This time we must have a strong Weyrwoman."

"This time—the Red Star?" the girl gasped, turning frightened eyes to F'lar.

"You understand what it means?"

"There is danger . . ." she began in a bare whisper, glancing apprehensively eastward.

F'lar did not question by what miracle she appreciated the imminence of danger. He had every intention of taking her to the Weyr by sheer force if necessary. But something within him wanted very much for her to accept the challenge voluntarily. A rebellious

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Weyrwoman would be even more dangerous than a stupid one. This girl had too much power and was too used to guile and strategy. It would be a calamity to antagonize her with injudicious handling.

"There is danger for all Pern. Not just Ruatha," he said, allowing a note of entreaty to creep into his voice. "And *you* are needed. Not by Ruatha," a wave of his hand dismissed that consideration as a negligible one compared to the total picture. "We are doomed without a strong Weyrwoman. Without you."

"Gemma kept saying *all* the bronze riders were needed," she murmured in a dazed whisper.

What did she mean by that statement? F'lar frowned. Had she heard a word he had said? He pressed his argument, certain only that he had already struck one responsive chord.

"You've won here. Let the babe," he saw her startled rejection of that idea and ruthlessly qualified it, ". . . Gemma's babe . . . be reared at Ruatha. You have command of all the Holds as Weyrwoman, not ruined Ruatha alone. You've accomplished Fax's death. Leave off vengeance."

She stared at F'lar with wonder, absorbing his words.

"I never thought beyond Fax's death," she admitted slowly. "I never thought what should happen then."

Her confusion was almost childlike and struck F'lar forcibly. He had had no time, or desire, to consider her prodigious accomplishment. Now he realized some measure of her indomitable character. She could not have been much over ten Turns of age herself when Fax had murdered her family. Yet somehow, so young, she had set herself a goal and managed to survive both brutality and detection long enough to secure the usurper's death. What a Weyrwoman she would be! In the tradition of those of Ruathan blood. The light of the paler moon made her look young and vulnerable and almost pretty.

"You can be Weyrwoman," he insisted gently.

"Weyrwoman," she breathed, incredulous, and gazed round the inner court bathed in soft moonlight. He thought she wavered.

"Or perhaps you enjoy rags?" he said, making his voice harsh, mocking. "And matted hair, dirty feet and cracked hands? Sleeping in straw, eating rinds? You are young . . . that is, I assume you are young," and his voice was frankly skeptical. She glared at him, her lips firmly pressed together. "Is this the be-all and end-all of your ambition? What are you that this little corner of the great world is *all* you want?" He paused and with utter contempt added, "The blood of Ruatha has thinned, I see. You're afraid!"

"I am Lessa, daughter of the Lord of Ruath," she countered, stung. She drew herself erect. Her

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eyes flashed. "I am afraid of nothing!"

F'lar contented himself with a slight smile.

Mnementh, however, threw up his head, and stretched out his sinuous neck to its whole length. His full-throated peal rang out down the valley. The bronze communicated his awareness to F'lar that Lessa had accepted the challenge. The other dragons answered back, their warbles shriller than Mnementh's bellow. The watch-wher which had cowered at the end of its chain lifted its voice in a thin, unnerving screech until the Hold emptied of its startled occupants.

"F'nor," the bronze rider called, waving his wingleader to him. "Leave half the flight to guard the Hold. Some nearby lord might think to emulate Fax's example. Send one rider to the High Reaches with the glad news. You go directly to the Cloth Hall and speak to L'to . . . Lytol." F'lar grinned. "I think he would make an exemplary Warder and Lord Surrogate for this Hold in the name of the Weyr and the babe."

The brown rider's face expressed enthusiasm for his mission as he began to comprehend his leader's intentions. With Fax dead and Ruatha under the protection of dragonmen, particularly that same one who had dispatched Fax, the Hold would have wise management.

"She caused Ruatha's deterioration?" he asked.

"And nearly ours with her machinations," F'lar replied but having found the admirable object of his Search, he could now be magnanimous. "Suppress your exultation, brother," he advised quickly as he took note of F'nor's expression. "The new queen must also be Impressed."

"I'll settle arrangements here. Lytol is an excellent choice," F'nor said.

"Who is this Lytol?" demanded Lessa pointedly. She had twisted the mass of filthy hair back from her face. In the moonlight the dirt was less noticeable. F'lar caught F'nor looking at her with an all too easily read expression. He signaled F'nor, with a peremptory gesture, to carry out his orders without delay.

"Lytol is a dragonless man," F'lar told the girl, "no friend to Fax. He will ward the Hold well and it will prosper." He added persuasively with a quelling stare full on her. "Won't it?"

She regarded him somberly, without answering, until he chuckled softly at her discomfiture.

"We'll return to the Weyr," he announced, proffering a hand to guide her to Mnementh's side.

The bronze one had extended his head toward the watch-wher who now lay panting on the ground, its chain limp in the dust.

"Oh," Lessa sighed, and dropped beside the grotesque beast. It raised its head slowly, lurring piteously.

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"Mnementh says it is very old and soon will sleep itself to death."

Lessa cradled the bestial head in her arms, scratching it behind the ears.

"Come, Lessa of Pern," F'lar said, impatient to be up and away.

She rose slowly but obediently. "It saved me. It knew me."

"It knows it did well," F'lar assured her, brusquely, wondering at such an uncharacteristic show of sentiment in her.

He took her hand again, to help her to her feet and lead her back to Mnementh. As they turned, he glimpsed the watch-wher, launching itself at a dead run after Lessa. The chain, however, held fast. The beast's neck broke, with a sickeningly audible snap.

Lessa was on her knees in an instant, cradling the repulsive head in her arms.

"Why, you foolish thing, why?" she asked in a stunned whisper as the light in the beast's green-gold eyes dimmed and died out.

Mnementh informed F'lar that the creature had lived this long only to preserve the Ruathan line. At Lessa's imminent departure, it had welcomed death.

A convulsive shudder went through Lessa's slim body. F'lar watched as she undid the heavy buckle that fastened the metal collar about the watch-wher's neck. She threw the tether away with a violent motion. Tenderly she laid the watch-wher on the cobbles. With one last caress to the clipped wings, she rose in a fluid movement and walked resolutely to Mnementh without a single backward glance. She stepped calmly to the dragon's raised leg and seated herself, as F'lar directed, on the great neck.

F'lar glanced around the courtyard at the remainder of his wing which had reformed there. The Hold folk had retreated back into the safety of the Great Hall. When his wingmen were all astride, he vaulted to Mnementh's neck, behind the girl.

"Hold tightly to my arms," he ordered her as he took hold of the smallest neck ridge and gave the command to fly.

Her fingers closed spasmodically around his forearm as the great bronze dragon took off, the enormous wings working to achieve height from the vertical takeoff. Mnementh preferred to fall into flight from a cliff or tower. Like all dragons, he tended to indolence. F'lar glanced behind him, saw the other dragonmen form the flight line, spread out to cover those still on guard at Ruatha Hold.

When they had reached a sufficient altitude, he told Mnementh to transfer, going *between* to the Weyr.

Only a gasp indicated the girl's astonishment as they hung *between*. Accustomed as he was to the sting of the profound cold, to the awesome utter lack of light and sound, F'lar still found the sensations unnerving. Yet the uncommon trans-

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fer spanned no more time than it took to cough thrice.

Mnementh rumbled approval of this candidate's calm reaction as they flicked out of the eerie *between.*

And then they were above the Weyr, Mnementh setting his wings to glide in the bright daylight, half a world away from night-time Ruatha.

As they circled above the great stony trough of the Weyr, F'lar peered at Lessa's face, pleased with the delight mirrored there; she showed no trace of fear as they hung a thousand lengths above the high Benden mountain range. Then, as the seven dragons roared their incoming cry, an incredulous smile lit her face.

The other wingmen dropped into a wide spiral, down, down while Mnementh elected to descend in lazy circles. The dragonmen peeled off smartly and dropped, each to his own tier in the caves of the Weyr. Mnementh finally completed his leisurely approach to their quarters, whistling shrilly to himself as he braked his forward speed with a twist of his wings, dropping lightly at last to the ledge. He crouched as F'lar swung the girl to the rough rock, scored from thousands of clawed landings.

"This leads only to our quarters," he told her as they entered the corridor, vaulted and wide for the easy passage of great bronze dragons.

As they reached the huge natural cavern that had been his since Mnementh achieved maturity, F'lar looked about him with eyes fresh from his first prolonged absence from the Weyr. The huge chamber was unquestionably big, certainly larger than most of the halls he had visited in Fax's procession. Those halls were intended as gathering places for men, not the habitations of dragons. But suddenly he saw his own quarters were nearly as shabby as all Ruatha. Benden was, of a certainty, one of the oldest dragonweyrs, as Ruatha was one of the oldest Holds, but that excused nothing. How many dragons had bedded in that hollow to make solid rock conform to dragon proportions! How many feet had worn the path past the dragon's weyr into the sleeping chamber, to the bathing room beyond where the natural warm spring provided everfresh water! But the wall hangings were faded and unraveling and there were grease stains on lintel and floor that should be sanded away.

He noticed the wary expression on Lessa's face as he paused in the sleeping room.

"I must feed Mnementh immediately. So you may bathe first," he said, rummaging in a chest and finding clean clothes for her, discards of other previous occupants of his quarters, but far more presentable than her present covering. He carefully laid back in the chest the white wool robe that was traditional Im-

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pression garb. She would wear that later. He tossed several garments at her feet and a bag of sweetsand, gesturing to the hanging that obscured the way to the bath.

He left her, then, the clothes in a heap at her feet, for she made no effort to catch anything.

Mnementh informed him that F'nor was feeding Canth and that he, Mnementh, was hungry, too. *She* didn't trust F'lar but she wasn't afraid of himself.

"Why should she be afraid of you?" F'lar asked. "You're cousin to the watch-wher who was her only friend."

Mnementh informed F'lar that he, a fully matured bronze dragon, was no relation to any scrawny, crawling, chained, and wing-clipped watch-wher.

F'lar, pleased at having been able to tease the bronze one, chuckled to himself. With great dignity, Mnementh curved down to the feeding ground.

By the Golden Egg of Faranth
By the Weyrwoman, wise and true,
Breed a flight of bronze and brown wings,
Breed a flight of green and blue.
Breed riders, strong and daring,
Dragon-loving, born as hatched,
Flight of hundreds soaring skyward,
Man and dragon fully matched.

Lessa waited until the sound of the dragonman's footsteps proved he had really gone away. She rushed quickly through the big cavern, heard the scrape of claw and the *whoosh* of the mighty wings. She raced down the short passageway, right to the edge of the yawning entrance. There was the bronze dragon circling down to the wider end of the mile-long barren oval that was Benden Weyr. She had heard of the Weyrs, as any Pernese had, but to be in one was quite a different matter.

She peered up, around, down that sheer rock face. There was no way off but by dragon wing. The nearest cave mouths were an unhandy distance above her, to one side, below her on the other. She was neatly secluded here.

Weyrwoman, he had told her. His woman? In his weyr? Was that what he had meant? No, that was not the impression she got from the dragon. It occurred to her, suddenly, that it was odd she had understood the dragon. Were common folk able to? Or was it the dragonman blood in her line? At all events, Mnementh had inferred something greater, some special rank. She remembered vaguely that, when dragonmen went on Search, they looked for certain women. Ah, certain women. She was one, then, of several contenders. Yet the bronze rider had offered her the position as if she and

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she, alone, qualified. He had his own generous portion of conceit, that one, Lessa decided. Arrogant he was, though not a bully like Fax.

She could see the bronze dragon swoop down to the running herd-beasts, saw the strike, saw the dragon wheel up to settle on a far ledge to feed. Instinctively she drew back from the opening, back into the dark and relative safety of the corridor.

The feeding dragon evoked scores of horrid tales. Tales at which she had scoffed but now . . . Was it true, then, that dragons did eat human flesh? Did . . . Lessa halted that trend of thought. Dragonkind was no less cruel than mankind. The dragon, at least, acted from bestial need rather than bestial greed.

Assured that the dragonman would be occupied a while, she crossed the larger cave into the sleeping room. She scooped up the clothing and the bag of cleansing sand and proceeded to the bathing room.

To be clean! To be completely clean and to be able to stay that way. With distaste, she stripped off the remains of the rags, kicking them to one side. She made a soft mud with the sweetsand and scrubbed her entire body until she drew blood from various half-healed cuts. Then she jumped into the pool, gasping as the warm water made the sweetsand foam in the lacerations.

It was a ritual cleansing of more than surface soil. The luxury of cleanliness was ecstasy.

Finally satisfied she was as clean as one long soaking could make her, she left the pool, reluctantly. Wringing out her hair she tucked it up on her head as she dried herself. She shook out the clothing and held one garment against her experimentally. The fabric, a soft green, felt smooth under her water-shrunken fingers, although the nap caught on her roughened hands. She pulled it over her head. It was loose but the darker-green over-tunic had a sash which she pulled in tight at the waist. The unusual sensation of softness against her bare skin made her wriggle with voluptuous pleasure. The skirt, no longer a ragged hem of tatters, swirled heavily around her ankles. She smiled. She took up a fresh drying cloth and began to work on her hair.

A muted sound came to her ears and she stopped, hands poised, head bent to one side. Straining, she listened. Yes, there were sounds without. The dragonman and his beasts must have returned. She grimaced to herself with annoyance at this untimely interruption and rubbed harder at her hair. She ran fingers through the half-dry tangles, the motions arrested as she encountered snarls. Vexed, she rummaged on the shelves until she found, as she had hoped to, a coarse-toothed metal comb.

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Dry, her hair had a life of its own suddenly, crackling about her hands and clinging to face and comb and dress. It was difficult to get the silky stuff under control. And her hair was longer than she had thought, for, clean and unmatted, it fell to her waist—when it did not cling to her hands.

She paused, listening, and heard no sound at all. Apprehensively, she stepped to the curtain and glanced warily into the sleeping room. It was empty. She listened and caught the perceptible thoughts of the sleepy dragon. Well, she would rather meet the man in the presence of a sleepy dragon than in a sleeping room. She started across the floor and, out of the corner of her eye, caught sight of a strange woman as she passed a polished piece of metal hanging on the wall.

Amazed, she stopped short, staring, incredulous, at the face the metal reflected. Only when she put her hands to her prominent cheekbones in a gesture of involuntary surprise and the reflection imitated the gesture, did she realize she looked at herself.

Why, that girl in the reflector was prettier than Lady Tela, than the clothman's daughter! But so thin. Her hands of their own volition dropped to her neck, to the protruding collarbones, to her breasts which did not entirely accord with the gauntness of the rest of her. The dress was too large for her frame, she noted with an unexpected emergence of conceit born in that instant of delighted appraisal. And her hair . . . it stood out around her head like an aureole. It wouldn't lie contained. She smoothed it down with impatient fingers, automatically bringing locks forward to hang around her face. As she irritably pushed them back, dismissing a need for disguise, the hair drifted up again.

A slight sound, the scrape of a boot against stone, caught her back from her bemusement. She waited, momentarily expecting him to appear. She was suddenly timid. With her face bare to the world, her hair behind her ears, her body outlined by a clinging fabric, she was stripped of her accustomed anonymity and was, therefore, in her estimation, vulnerable.

She controlled the desire to run away—the irrational fear. Observing herself in the looking metal, she drew her shoulders back, tilted her head high, chin up; the movement caused her hair to crackle and cling and shift about her head. She was Lessa of Ruatha, of a fine old Blood. She no longer needed artifice to preserve herself; she must stand proudly bare-faced before the world . . . and that dragonman.

Resolutely she crossed the room, pushing aside the hanging on the doorway to the great cavern.

He was there, beside the head of the dragon, scratching its eye

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ridges, a curiously tender expression on his face. The tableau was at variance with all she had heard of dragonmen.

She had, of course, heard of the strange affinity between rider and dragon but this was the first time she realized that love was part of that bond. Or that this reserved, cold man was capable of such deep emotion.

He turned slowly, as if loath to leave the bronze beast. He caught sight of her and pivoted completely round, his eyes intense as he took note of her altered appearance. With quick, light steps, he closed the distance between them and ushered her back into the sleeping room, one strong hand holding her by the elbow.

"Mnementh has fed lightly and will need quiet to rest," he said in a low voice. He pulled the heavy hanging into place across the opening.

Then he held her away from him, turning her this way and that, scrutinizing her closely, curious and slightly surprised.

"You wash up . . . pretty, yes, almost pretty," he said, amused condescension in his voice. She pulled roughly away from him, piqued. His low laugh mocked her. "After all, how could one guess what was under the grime of . . . ten full Turns?"

At length he said, "No matter. We must eat and I shall require your services." At her startled exclamation, he turned, grinning maliciously now as his movement revealed the caked blood on his left sleeve. "The least you can do is bathe wounds honorably received fighting your battle."

He pushed aside a portion of the drape that curtained the inner wall. "Food for two!" he roared down a black gap in the sheer stone.

She heard a subterranean echo far below as his voice resounded down what must be a long shaft.

"Nemorth is nearly rigid," he was saying as he took supplies from another drape-hidden shelf, "and the Hatching will soon begin anyhow."

A coldness settled in Lessa's stomach at the mention of a Hatching. The mildest tales she had heard about that part of dragonlore were chilling, the worst dismayingly macabre. She took the things he handed her numbly.

"What? Frightened?" the dragonman taunted, pausing as he stripped off his torn and bloodied shirt.

With a shake of her head, Lessa turned her attention to the wide-shouldered, well-muscled back he presented her, the paler skin of his body decorated with random bloody streaks. Fresh blood welled from the point of his shoulder for the removal of his shirt had broken the tender scabs.

"I will need water," she said and saw she had a flat pan among the items he had given her. She went swiftly to the pool for water, won-

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dering how she had come to agree to venture so far from Ruatha. Ruined though it was, it had been hers and was familiar to her from Tower to deep cellar. At the moment the idea had been proposed and insidiously prosecuted by the dragonman, she had felt capable of anything, having achieved, at last, Fax's death. Now, it was all she could do to keep the water from slopping out of the pan that shook unaccountably in her hands.

She forced herself to deal only with the wound. It was a nasty gash, deep where the point had entered and torn downward in a gradually shallower slice. His skin felt smooth under her fingers as she cleansed the wound. In spite of herself, she noticed the masculine odor of him, compounded not unpleasantly of sweat, leather, and an unusual muskiness which must be from close association with dragons.

She stood back when she had finished her ministration. He flexed his arm experimentally in the constricting bandage and the motion set the muscles rippling along side and back.

When he faced her, his eyes were dark and thoughtful.

"Gently done. My thanks." His smile was ironic.

She backed away as he rose but he only went to the chest to take out a clean, white shirt.

A muted rumble sounded, growing quickly louder.

Dragons roaring? Lessa wondered, trying to conquer the ridiculous fear that rose within her. Had the Hatching started? There was no watch-wher's lair to secrete herself in, here.

As if he understood her confusion, the dragonman laughed goodhumoredly and, his eyes on hers, drew aside the wall covering just as some noisy mechanism inside the shaft propelled a tray of food into sight.

Ashamed of her unbased fright and furious that he had witnessed it, Lessa sat rebelliously down on the fur-covered wall seat, heartily wishing him a variety of serious and painful injuries which she could dress with inconsiderate hands. She would not waste future opportunities.

He placed the tray on the low table in front of her, throwing down a heap of furs for his own seat. There was meat, bread, a tempting yellow cheese and even a few pieces of winter fruit. He made no move to eat nor did she, though the thought of a piece of fruit that was ripe, instead of rotten, set her mouth to watering. He glanced up at her, and frowned.

"Even in the Weyr, the lady breaks bread first," he said, and inclined his head politely to her.

Lessa flushed, unused to any courtesy and certainly unused to being first to eat. She broke off a chunk of bread. It was like nothing she remembered having tasted be-

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fore. For one thing, it was fresh-baked. The flour had been finely sifted, without trace of sand or hull. She took the slice of cheese he proffered her and it, too, had an uncommonly delicious sharpness. Made bold by this indication of her changed status, Lessa reached for the plumpest piece of fruit.

"Now," the dragonman began, his hand touching hers to get her attention.

Guiltily she dropped the fruit, thinking she had erred. She stared at him, wondering at her fault. He retrieved the fruit and placed it back in her hand as he continued to speak. Wide-eyed, disarmed, she nibbled, and gave him her full attention.

"Listen to me. You must not show a moment's fear, whatever happens on the Hatching Ground. And you must not let her overeat." A wry expression crossed his face. "One of our main functions is to keep a dragon from excessive eating."

Lessa lost interest in the taste of the fruit. She placed it carefully back in the bowl and tried to sort out not what he had said, but what his tone of voice implied. She looked at the dragonman's face, seeing him as a person, not a symbol, for the first time.

There was a blackness about him that was not malevolent; it was a brooding sort of patience. Heavy black hair, heavy black brows; his eyes, a brown light enough to seem golden, were all too expressive of cynical emotions, or cold hauteur. His lips were thin but well-shaped and in repose almost gentle. Why must he always pull his mouth to one side in disapproval or in one of those sardonic smiles? At this moment, he was completely unaffected.

He meant what he was saying. He did not want her to be afraid. There was no reason for her, Lessa, *to* fear.

He very much wanted her to succeed. In keeping whom from overeating what? Herd animals? A newly hatched dragon certainly wasn't capable of eating a full beast. That seemed a simple enough task to Lessa. . . . Main function? *Our* main function?

The dragonman was looking at her expectantly.

"Our main function?" she repeated, an unspoken request for more information inherent in her inflection.

"More of that later. First things first," he said, impatiently waving off other questions.

"But what happens?" she insisted.

"As I was told so I tell you. No more, no less. Remember these two points. No fear, and no overeating."

"But . . ."

"You, however, need to eat. Here." He speared a piece of meat on his knife and thrust it at her, frowning until she managed to choke it down. He was about to

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force more on her but she grabbed up her half-eaten fruit and bit down into the firm sweet sphere instead. She had already eaten more at this one meal than she was accustomed to having all day at the Hold.

"We shall soon eat better at the Weyr," he remarked, regarding the tray with a jaundiced eye.

Lessa was surprised. This was a feast, in her opinion.

"More than you're used to? Yes, I forgot you left Ruatha with bare bones indeed."

She stiffened.

"You did well at Ruatha. I mean no criticism," he added, smiling at her reaction. But look at you," and he gestured at her body, that curious expression crossing his face, half-amused, half-contemplative. "I should not have guessed you'd clean up pretty," he remarked. "Nor with such hair." This time his expression was frankly admiring.

Involuntarily she put one hand to her head, the hair crackling over her fingers. But what reply she might have made him, indignant as she was, died aborning. An unearthly keening filled the chamber.

The sounds set up a vibration that ran down the bones behind her ear to her spine. She clapped both hands to her ears. The noise rang through her skull despite her defending hands. As abruptly as it started, it ceased.

Before she knew what he was about, the dragonman had grabbed her by the wrist and pulled her over to the chest.

"Take those off," he ordered, indicating dress and tunic. While she stared at him stupidly, he held up a loose white robe, sleeveless and beltless, a matter of two lengths of fine cloth fastened at shoulder and side seams. "Take it off, or do I assist you?" he asked, with no patience at all.

The wild sound was repeated and its unnerving tone made her fingers fly faster. She had no sooner loosened the garments she wore, letting them slide to her feet, than he had thrown the other over her head. She managed to get her arms in the proper places before he grabbed her wrist again and was speeding with her out of the room, her hair whipping out behind her, alive with static.

As they reached the outer chamber, the bronze dragon was standing in the center of the cavern, his head turned to watch the sleeping room door. He seemed impatient to Lessa; his great eyes, which fascinated her so, sparkled iridescently. His manner breathed an inner excitement of great proportions and from his throat a high-pitched croon issued, several octaves below the unnerving cry that had roused them all.

With a yank that rocked her head on her neck, the dragonman pulled her along the passage. The dragon padded beside them at such speed that Lessa fully expected

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they would all catapult off the ledge. Somehow, at the crucial stride, she was a-perch the bronze neck, the dragonman holding her firmly about the waist. In the same fluid movement, they were gliding across the great bowl of the Weyr to the higher wall opposite. The air was full of wings and dragon tails, rent with a chorus of sounds, echoing and re-echoing across the stony valley.

Mnementh set what Lessa was certain would be a collision course with other dragons, straight for a huge round blackness in the cliff-face, high up. Magically, the beasts filed in, the greater wingspread of Mnementh just clearing the sides of the entrance.

The passageway reverberated with the thunder of wings. The air compressed around her thickly. Then they broke out into a gigantic cavern.

Why, the entire mountain must be hollow, thought Lessa, incredulous. Around the enormous cavern, dragons perched in serried ranks, blues, greens, browns and only two great bronze beasts like Mnementh, on ledges meant to accommodate hundreds. Lessa gripped the bronze neck scales before her, instinctively aware of the imminence of a great event.

Mnementh wheeled downward, disregarding the ledge of the bronze ones. Then all Lessa could see was what lay on the sandy floor of the great cavern; dragon eggs. A clutch of ten monstrous, mottled eggs, their shells moving spasmodically as the fledglings within tapped their way out. To one side, on a raised portion of the floor, was a golden egg, larger by half again the size of the mottled ones. Just beyond the golden egg lay the motionless ochre hulk of the old queen.

Just as she realized Mnementh was hovering over the floor in the vicinity of that egg, Lessa felt the dragonman's hands on her, lifting her from Mnementh's neck.

Apprehensively, she grabbed at him. His hands tightened and inexorably swung her down. His eyes, fierce and gray, locked with hers.

"Remember, Lessa!"

Mnementh added an encouragement, one great compound eye turned on her. Then he rose from the floor. Lessa half-raised one hand in entreaty, bereft of all support, even that of the sure inner compulsion which had sustained her in her struggle for revenge on Fax. She saw the bronze dragon settle on the first ledge, at some distance from the other two bronze beasts. The dragonman dismounted and Mnementh curved his sinuous neck until his head was beside his rider. The man reached up absently, it seemed to Lessa, and caressed his mount.

Loud screams and wailings diverted Lessa and she saw more dragons descend to hover just above the cavern floor, each rider

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depositing a young woman until there were twelve girls, including Lessa. She remained a little apart from them as they clung to each other. She regarded them curiously. The girls were not injured in any way she could see, so why such weeping? She took a deep breath against the coldness within her. Let *them* be afraid. She was Lessa of Ruatha and did not need to be afraid.

Just then, the golden egg moved convulsively. Gasping as one, the girls edged away from it, back against the rocky wall. One, a lovely blonde, her heavy plait of golden hair swinging just above the ground, started to step off the raised floor and stopped, shrieking, backing fearfully towards the scant comfort of her peers.

Lessa wheeled to see what cause there might be for the look of horror on the girl's face. She stepped back involuntarily herself.

In the main section of the sandy arena, several of the handful of eggs had already cracked wide open. The fledglings, crowing weakly, were moving towards . . . and Lessa gulped . . . the young boys standing stolidly in a semi-circle. Some of them were no older than she had been when Fax's army had swooped down on Ruath Hold.

The shrieking of the women subsided to muffled gasps. A fledgling reached out with claw and beak to grab a boy.

Lessa forced herself to watch as the young dragon mauled the youth, throwing him roughly aside as if unsatisfied in some way. The boy did not move and Lessa could see blood seeping onto the sand from dragon-inflicted wounds.

A second fledgling lurched against another boy and halted, flapping its damp wings impotently, raising its scrawny neck and croaking a parody of the encouraging croon Mnementh often gave. The boy uncertainly lifted a hand and began to scratch the eye ridge. Incredulous, Lessa watched as the fledgling, its crooning increasingly more mellow, ducked its head, pushing at the boy. The child's face broke into an unbelieving smile of elation.

Tearing her eyes from this astounding sight, Lessa saw that another fledgling was beginning the same performance with another boy. Two more dragons had emerged in the interim. One had knocked a boy down and was walking over him, oblivious to the fact that its claws were raking great gashes. The fledgling who followed its hatch-mate stopped by the wounded child, ducking its head to the boy's face, crooning anxiously. As Lessa watched, the boy managed to struggle to his feet, tears of pain streaming down his cheeks. She could hear him pleading with the dragon not to worry, that he was only scratched a little.

It was over very soon. The young dragons paired off with boys. Green

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riders dropped down to carry off the unacceptable. Blue riders settled to the floor with their beasts and led the couples out of the cavern, the young dragons squealing, crooning, flapping wet wings as they staggered off, encouraged by their newly acquired weyrmates.

Lessa turned resolutely back to the rocking golden egg, knowing what to expect and trying to divine what the successful boys had, or had not done, that caused the baby dragons to single them out.

A crack appeared in the golden shell and was greeted by the terrified screams of the girls. Some had fallen into little heaps of white fabric, others embraced tightly in their mutual fear. The crack widened and the wedge head broke through, followed quickly by the neck, gleaming gold. Lessa wondered with unexpected detachment how long it would take the beast to mature, considering its by no means small size at birth. For the head was larger than that of the male dragons and they had been large enough to overwhelm sturdy boys of ten full Turns.

Lessa was aware of a loud hum within the Hall. Glancing up at the audience, she realized it emanated from the watching bronze dragons, for this was the birth of their mate, their queen. The hum increased in volume as the shell shattered into fragments and the golden, glistening body of the new female emerged. It staggered out, dipping its sharp beak into the soft sand, momentarily trapped. Flapping its wet wings, it righted itself, ludicrous in its weak awkwardness. With sudden and unexpected swiftness, it dashed towards the terror-stricken girls.

Before Lessa could blink, it shook the first girl with such violence, her head snapped audibly and she fell limply to the sand. Disregarding her, the dragon leaped towards the second girl but misjudged the distance and fell, grabbing out with one claw for support and raking the girl's body from shoulder to thigh. The screaming of the mortally injured girl distracted the dragon and released the others from their horrified trance. They scattered in panicky confusion, racing, running, tripping, stumbling, falling across the sand towards the exit the boys had used.

As the golden beast, crying piteously, lurched down from the raised arena towards the scattered women, Lessa moved. Why hadn't that silly clunk-headed girl stepped aside, Lessa thought, grabbing for the wedge-head, at birth not much larger than her own torso. The dragon's so clumsy and weak she's her own worst enemy.

Lessa swung the head round so that the many-faceted eyes were forced to look at her . . . and found herself lost in that rainbow regard.

A feeling of joy suffused Lessa, a feeling of warmth, tenderness, unal-

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loyed affection and instant respect and admiration flooded mind and heart and soul. Never again would Lessa lack an advocate, a defender, an intimate, aware instantly of the temper of her mind and heart, of her desires. How wonderful was Lessa, the thought intruded into Lessa's reflections, how pretty, how kind, how thoughtful, how brave and clever!

Mechanically, Lessa reached out to scratch the exact spot on the soft eye ridge.

The dragon blinked at her wistfully, extremely sad that she had distressed Lessa. Lessa reassuringly patted the slightly damp, soft neck that curved trustingly towards her. The dragon reeled to one side and one wing fouled on the hind claw. It hurt. Carefully, Lessa lifted the erring foot, freed the wing, folding it back across the dorsal ridge with a pat.

The dragon began to croon in her throat, her eyes following Lessa's every move. She nudged at Lessa and Lessa obediently attended the other eye ridge.

The dragon let it be known she was hungry.

"We'll get you something to eat directly," Lessa assured her briskly and blinked back at the dragon in amazement. How could she be so callous? It was a fact that this little menace had just now seriously injured, if not killed, two women.

She wouldn't have believed her sympathies could swing so alarmingly towards the beast. Yet it was the most natural thing in the world for her to wish to protect this fledgling.

The dragon arched her neck to look Lessa squarely in the eyes. Ramoth repeated wistfully how exceedingly hungry she was, confined so long in that shell without nourishment.

Lessa wondered how she knew the golden dragon's name and Ramoth replied: Why shouldn't she know her own name since it was hers and no one else's? And then Lessa was lost again in the wonder of those expressive eyes.

Oblivious to the descending bronze dragons, uncaring of the presence of their riders, Lessa stood caressing the head of the most wonderful creature on all Pern, fully prescient of troubles and glories, but most immediately aware that Lessa of Pern was Weyrwoman to Ramoth the Golden, for now and forever. ■

The Bonestell January and August 1967 covers were available in limited supply. We can no longer fill orders for the January cover and the August supply is fast approaching zero.

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Toys

The trouble with unlimited education is that knowledge, per se, bears no correlation with judgment.

TOM PURDOM

Illustrated by Leo Summers

A picture appeared on the fifteen centimeter television screen in the middle of the instrument panel. An unmanned patrol vehicle had picked up a scene that looked bad and the central computer had brought it to the attention of the dispatcher. A mob seemed to be gathering around Three Thousand One Strawberry Row. About fifty people were standing around in little groups in the adjacent yards. In the yard of the house itself, in front of the main entrance, a boy was sitting on top of a small elephant. Two dragons were sitting on their haunches with their wings raised and a gorilla and two watch-tigers were pacing on the grass.

A car slid onto the left side of the screen and flew up to the house. It stopped next to a fourth floor window and a female voice screamed through a loudspeaker. "Get out of that house, Andrew Bruder. Get out of that house right now. Who do you think you are?"

Round faces looked up through the twilight. A childish voice yelled at the woman through a loudspeaker inside the house. "Get outta our yard, Mrs. Bruder. Back off or we'll let our hostages sit here until you're gone. We aren't kidding. This is no game."

The boy mounted on the elephant cupped his hands over his mouth and told the woman to go have a heart attack. A tiger raised its head and snarled. The elephant trumpeted. The gorilla hopped around on all fours and beat its chest.

"I had the computer call everybody in a twenty-house radius," the dispatcher said. "The reports are coming in now. Ten to twelve children have taken the Rice family hostage. They seem to be led by the Rice's nine year old son, Tim. Their main weapons seem to be their pets, but they may have other weapons inside the house. They want a committee of three parents to enter

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the house and negotiate with them, but they won't say what they want."

The police car leveled off two hundred meters above the regular traffic lanes and sped east with its siren screaming. Inside the cockpit, Charley Edelman's left hand tightened around the neck of an imaginary cello. He glanced at Helen Fracarro; she shook her head and shrugged. The joyride was over. One moment you were riding around in the evening talking about children's books with a girl whose soft, romantic face would have made a Spanish cavalier howl with frustration—and the next moment you were listening to a quiet voice tell you the State of New Jersey needed your services once again, and please get ready to earn your fabulous two hundred thousand a year salary the way you had agreed to earn it.

"What'll they do if nobody negotiates with them?" Edelman asked the dispatcher.

"They haven't said yet."

Fracarro pressed a button on the instrument panel and flashed the central computer. "This is Team Six. Transmit all available data on people with the last name Rice who live at Three Thousand One Strawberry Row, Harriman Township."

A screen lit up on the right-hand side of the instrument panel. Documents sped across Edelman's vision at sixteen hundred words per minute. The housing development in which the Rice family lived came into sight. Edelman asked the computer for a plan of the house and a recommendation on which psycho gases should be used if they went inside. Both answers came back as they passed over the east end of the development and made their turn. The computer's first choice, psycho gas G-11-1, would cover a room in one hundred and twenty seconds and would make the children submissive and suggestible. The supply in the standard police car gas kit was the bare minimum required, however, and they couldn't mix it with other gases. The second choice, gas G-11-8, would cover a room in one hundred and forty seconds and would make the children deliriously happy—a dangerously unpredictable state—but they had twice as much as they needed.

Fracarro turned off the siren. They dropped to the west-bound lane and passed over the house concealed in the traffic. Below them thousands of white plastic towers gleamed in the evening sun. Ten thousand lower-income families lived in a crowded grid two kilometers square. Every family had a lot twenty meters square surrounded by a high plastic wall and in the southeast corner of every lot there was a square, five-story house exactly like every other house in the development.

"How do the people in the neighborhood sound?" Edelman asked.

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"They're getting restless. Several people may be planning to break into the house in spite of the hostages and give the kids a good bruising. The computer just talked to a woman who's pleading with us not to let her husband go in."

"Can you give me a prediction on how long we've got before they get violent?"

The dispatcher paused. "You've got twenty-five minutes," she said after a minute. "It looks like it may be a real explosion when it comes. I just had the computer replay some of the calls. Those people sound like they're programmed for murder."

Edelman's left hand closed around the imaginary cello again. He had been a musician for twelve years before he had become a cop and at times like this fifty thousand a year and a back seat in a third-rate orchestra looked better than two hundred thousand a year and a socially important job that was supposed to make the best possible use of his IQ and all the sterling virtues the psychologists claimed they had found revealed in his psych tests. The genetic engineers had turned lizards into dragons, but they hadn't turned Charley Edelman into St. George.

He had done undercover work in a lower-income housing development for one of his sociology courses and he had a vivid picture of the conflicts that sometimes destroyed lower-income family life. In a family like David Rice's, every member of the family would be waging an unending war for a bigger slice of Daddy's eighteen-eighty a year. There was no end to all the lovely, desirable, tormenting things modern technology had created.

Medical treatments that could add a hundred years to David Rice's life span and give him a biological age of twenty-five until he died; surgical-chemical treatments that could make his daughter as beautiful as any woman who had ever lived; continuous life-long psychotherapy; home computers; expensive pets; educational toys guaranteed to raise a child's IQ twenty points; custom-made learning programs that could teach Mom and Dad how to have complete sexual satisfaction, or their male offspring how to be the best kid in the neighborhood at any sport or competitive skill you could name . . . Every house below his car was an arena and the people who fought the dirtiest were the children. He was looking down on hundreds of parents who would be glad to take out their anger on any child who gave them a good excuse. He might be yellower than the psychologists said he was, but if the wrong parent got his hands on a kid, somebody might get killed and they might lose the hostages, too.

"I guess we'd better go in," he said. "We can always pull back if it looks like somebody's about to get hurt."

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Fracarro nodded. "Shall we try the clown-and-witch act?"

Edelman asked the computer for an estimate on how the children would react to psychodrama Five B and he and Fracarro rattled off a string of numbers—their individual numerical estimates of the emotional stresses on the children. The computer averaged their estimates and made some calculations based on the information it had about the children inside the house and a graph appeared on the right-hand screen. The clown-and-witch act would probably put the children off guard, but it might not have any significant effect on their behavior.

Edelman shrugged. "We'll give it a try anyway. Can you send us a hospital, Dispatcher?"

"It'll be there in twelve minutes."

"What about the animals?" Fracarro asked. "What have they got in the house?"

"Two gorillas and a watchtiger are unaccounted for."

They checked their side arms and put on their gas masks. Edelman helped Fracarro squirm into her combat coverall and hooked her pack onto her back and she returned the favor. Tough plastic covered them from head to foot and they had bulletproof padding around their torsos and their heads. A gorilla could still break their bones if it got a grip on them, and a bullet in a leg, or an arm, could cripple them and set them up for something worse, but they were protected from some of the more obvious injuries Tim Rice might try to inflict on them.

The crowd shouted at them as they descended on the house. They stopped beside the balcony outside the fifth-floor window and the two dragons raised their heads and hissed. The elephant's master shook his fist. A girl pushed her head out the front door and stuck out her tongue.

"Back off, Coppy," the loudspeaker screamed. "Beat it. We've got three hostages and we're armed. Don't push us. We aren't playing."

Edelman stepped onto the balcony. The car dropped away from him and he looked around wildly. He took a special attachment out of his pack and squinted as he held his pistol in front of his face and screwed the attachment on the muzzle. He jammed a heavy four-centimeter ball into the attachment and winced as he fired it at the tough, burglarproof plastic. The plastic cracked and he stuffed another ball into the attachment and fired again.

"Can't you hear us?" the loudspeaker blared. "We aren't kidding. You won't leave here alive."

The third ball slipped out of Edelman's fingers. He stamped his foot peevishly and bent over and picked it up. In the yard on his left a woman ran up to the fence and climbed on a chair. *"He's gonna hurt my son! Stop him!"*

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The people standing in the yard with the woman moved toward the fence. The watchtiger snarled at her and two men pulled her off the chair. Five men and women drew together and started talking.

On the balcony below Edelman Fracarro's first ball slammed into the window in front of her. Edelman held his gun in front of him at arm's length and winced as he fired again. Flaw lines appeared all over the window and he tapped it with the muzzle of his gun and broke open a hole big enough to walk through.

He threw a gas bomb through the hole and stepped inside in a crouch. He waved his gun back and forth in wide arcs and his eyes darted around the room as if he expected a hundred bad guys to leap at him out of the mist.

A console crowded with screens and dials covered most of the wall in front of him. Most of the stuff on the shelves hanging on the wall on his left looked like lab equipment. An electron microscope was sitting next to a colorfully boxed kit for altering genes with a laser beam; an automated air station was recording the content of the local atmosphere; something was swimming inside a life-support tank . . .

He slipped into one of the five code languages he had been taught during his five years at the police college. "I'm in the boy's room," he said into his intercom. "It's full of wonderful educational toys."

"This one looks like the daughter's room," Fracarro said. "It looks like she put up a fight. Do you see any educational death rays?"

Edelman tiptoed up to the console and looked over the equipment. In the center of the room the gas bomb was still hissing. A ventilator in the ceiling was humming at emergency speed, but the green mist was getting thicker every second.

The screen in the middle of the console lit up. Tim Rice scowled up at him. "I'm warning you for the last time, Coppy. I'm watching every move you make. I've got eyes in every room in this house. I can kill you anytime I want to."

Edelman backed away from the console. He turned on the loudspeaker on his belt and straightened up. His voice took on the wooden, pompous tones of a television superhero giving a lecture on the evils of badthink.

"We're not here to take your hostages, Tim. Don't jump to conclusions. We're here to protect you from that mob out there. Our calculations based on advanced mathematical behavioral psychology indicate they may storm you in about twenty minutes. Where are you? We can't help you if we don't know where you are."

Tim tipped his head to one side and looked at him as if he had just been offered ten acres on Pluto. "Who do you think you're fooling?

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I can handle that mob with half the stuff I've got already. Why don't you go back to headquarters and finish your card game?"

"Quit insulting our intelligence," a girl said over a loudspeaker on the console. "Kids aren't as dumb as you think they are."

"We've been planning this thing for months," Tim said. "You aren't gonna spoil it with dumb tricks like that. We've made up our minds—we're gonna have every single thing we've got a right to have. Nobody's gonna stop us. If you're looking for somebody to protect, you'd better look after those overgrown clods outside."

Fracarro swore in Italian. "If you had any brains, you wouldn't have started this thing in the first place. What are you trying to get—room and board in jail for the rest of your life? What do you think this is, some kind of television program where they go *bang bang* and the people get up and do the commercial afterward? If we have to come in there and get you, you'll be lucky if they let you out before you're fifty."

Edelman winced. The girl on the loudspeaker said something in Italian just as flawless as Fracarro's and Fracarro's voice rose to a scream. Tim threw back his head and laughed and Edelman backed out of the room waving his gun. He stumbled over the sill as he went out the window and caught himself with a yelp.

Childish voices laughed. The air car came up to meet him and he stamped his foot peevishly and crawled through the open door.

Fracarro was waiting for him on the fourth floor balcony. She was waving her pistol at the shattered window and screaming like a madwoman. "You little mistakes! Get up here and do what you're told. Nobody talks to me like that. When I get my hands on you . . ."

"Get in," Edelman snarled. "You're ruining everything."

"Get out of here before I sic a gorilla on you," Tim Rice blared. "Go park some place with your high-IQ friend."

Edelman pulled Fracarro into the car. The traditional ya-ya chorus boomed out of the loudspeaker and the children in the yard joined in. Fracarro struggled for a moment and then they backed away from the house and looked at it as if they were wondering what to do next.

"I think they bought it," Fracarro said.

Edelman rubbed his arms. He could still feel her young body moving inside them. They had been working together less than ten days but he had already spent two sessions with his psychotherapist ventilating his feelings about her. He valued his relationship with his wife too much to risk wrecking it for something that would be different and exciting but no better. There were times, however . . .

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"I move we go in the fourth floor," he said. "We'll let the ventilator pull the gas out of the fifth. They sound like we'd better leave them a way out."

Another chorus of noises from the children and animals urged them back as they moved toward the house. "I'm warning you for the last time," Tim Rice blared. "I'm not playing games. Beat it."

Edelman leaped onto the balcony with his gun drawn. His foot dragged across the top of the rampart and he pitched forward onto his hands.

Fracarro's boots landed beside his head. She pulled him up with a snarl. "How did you ever get past the examiners? If they'd told me I was working with a clod like you, I'd have handed in my resignation."

"Leave me alone," Edelman said. "You're the one that made them angry."

The ventilator had already pulled half the gas out of Beatrice Rice's room. Fracarro pulled the pin on another gas bomb and Edelman pulled back a sliding panel in the middle of the floor and lowered an emergency ladder that had been folded into a storage space between the floors. They bumped their heads together as they bent over the hole and the intercom speaker mounted over the elevator picked up a giggle.

Fracarro straightened up. She pointed imperiously and Edelman bent over and examined the small area he could see. The lights had all been turned out and now that the sun had almost set most of the room was in shadow.

He dropped a bomb through the hole and started down the ladder with his gun drawn. As his head disappeared below the floor level, Fracarro dropped to one knee.

An immense hand struck his entire body. Fingers pulled on his stomach and his lungs. The blood drained out of his blood cells. His legs buckled and his fingers slipped off the ladder.

He hit the floor with a bone-bruising thud. His stomach turned over as the gravity dropped back to normal. He raised his head and stared around the room with eyes that seemed to be covered with a red mist.

"I warned you," Tim Rice yelled. "Get out of here or I'll give you another dose."

Edelman groaned. His body hurt from the tail bone up. His head ached and he felt nauseated, but he could still think well enough to remember he had to act as if he hurt worse than he did. "You crazy kid. You can kill somebody doing that."

"I told you we weren't playing games," the loudspeaker boomed. "We're gonna get a fair deal if we have to crush every stupid cop on the east coast. Get back up that ladder. Move."

Edelman forced himself up. He held on to the ladder with one hand.

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He was obviously in the family exercise room. Fencing foils, jump ropes, and Indian clubs hung on the walls and the control panel for the gravity changer had been set in the wall next to the elevator.

Alternatives slid across his mind. If he had the power company cut the power off, it probably wouldn't affect whatever other weapons the kids had and it might set off a panic and put the hostages in worse trouble than they were in already. He wouldn't be able to use the elevator, either, and if he got his hands on the hostages, he might want to get upstairs without phoning the power company.

Most devices had automatic cutoffs on them, however, especially devices that used up as much energy as gravity changers. Few parents were stupid enough to let their children run up huge debts to the power company. And the files he had examined in the car had indicated the Rice family had used up most of its power budget for the month. Another jolt like that and the unit would probably lock itself up.

He glanced up the ladder. Fracarro was already lying flat. Apparently she had unlimited faith in his devotion to duty.

"You don't understand, Tim. Listen to me. Don't let her frighten you. We're trying to protect—"

He dropped toward the floor and rolled on to his shoulder. His fingers lost their grip on his gun but the weight on his back felt two hundred pounds lighter. Either the power was out or the kid was hoarding what he had.

A light blinked over the elevator. Fracarro scrambled to her feet. Edelman picked up his gun and jumped up. Something snarled on Fracarro's floor. Fracarro's gun banged. A watchtiger shrieked. A girl screamed the name of a pet over the loudspeaker. A gorilla snarled.

The elevator door opened. He turned around with his gun at eye level and the radar sights leaped out. A gorilla bounded through the door and ran toward him on all fours.

The gravity changer clutched at him again. He threw himself to one side and Tim suddenly threw the field into reverse. For a confusing, nauseating moment he scrambled above the floor in free fall. His knees banged into the floor as the gravity returned to normal and he threw himself around and tried to fire at the black, hairy monster leaping toward him.

The gorilla struck at his gun arm with its open hand. The gun flew across the room. The gorilla's left hand shot toward his face and he rolled out of its way and jumped to his feet.

"Get 'em!" a voice yelled over the loudspeaker. "Kill 'em. Let 'em have it."

Edelman crouched with his hands raised. The gorilla rested on its

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knuckles and looked up at him warily. Its eyes glittered above the homemade gas mask strapped on its nose. It was more intelligent than any gorilla that had ever lived in the wild and it had been bought to be a bodyguard as well as a pet—in a world where any nine year old boy who wanted to could buy a learning program that would make him an expert in any unarmed art in a few months of solitary, drugged study with a practicing dummy.

The gorilla's powerful legs pushed it toward him like a cannonball. Its right hand shot toward his stomach. He jumped away from the blow and his right foot swung toward its legs.

The gorilla twisted around in midair. The edge of his boot-sole slid along its left leg. He pulled in his foot and the gorilla landed in front of him and launched itself at him again. His hand closed around its right wrist and guided it past him, it launched a kick at his side as it went by.

He started bending away from the kick as soon as he saw it coming. It rammed into his thigh and he hit the floor on his shoulder and rolled out of the fall yelling for help. "Call him off," he heard Fracarro yelling through her loudspeaker. "I'll kill him. *Call him off.*"

He pulled his knife out of its sheath. The gun was lying under a chair on the other side of the room. The gorilla was scrambling to its feet and two voices were yelling over the loudspeaker at the same time. "Stay where you are, Hector," a girl was screaming. "Leave her alone." "Keep him away from the gun, Joey," a boy yelled. "Don't let him get his hands on the gun."

The gorilla raced toward the gun on all fours. Edelman scrambled across the room jabbering like a frightened idiot and jumped in front of it with the knife poised at his hip. The gorilla hurled itself at his face and he grabbed it by the wrist and steeled himself to plunge in the knife as it went by.

The floor dropped away from him. His stomach turned over and he lost his balance and stumbled. The elevator door slid open and he saw a boy in a gas mask standing in the elevator with a tube cradled under his arm.

He threw himself behind the chair. A green light filled the room. He grabbed the gun and pulled himself into a ball and the elevator door closed.

He stood up cautiously. If the kids hadn't been watching him, he would have slumped into the chair and put his head in his hands. The laser beam had probably been too weak to penetrate his suit—it had looked like the kid had modified the beam that had come with his genetic engineering kit—but if he had been looking at it when it went off he would have been blinded.

"What are you doing down there?" Fracarro screamed. "What

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stupid games are you playing now?"

He slipped back into character as soon as he heard her voice. "He nearly blinded me," he whined. "He shot a laser at me. The gorilla nearly stole my gun."

Fracarro swore in Italian. "Tell this smelly hairball of yours to turn around," she yelled at the kids. "If it makes one move I don't like, I'm going to turn its hide into a fountain."

The loudspeaker picked up a gasp. "Turn around, Hector," a girl said. "Stand still. Keep your back to the lady. Please don't move."

The gorilla on the fourth floor snarled. Its feet shuffled on the floor. Fracarro walked across the room and a moment later the drug in her injector took effect and a big body slid to the floor.

Edelman looked around the room and frowned stupidly. He bent over as if he were pleading and started talking in code language. "Tell them you're going to shoot the gorilla if they don't surrender," he whined. "They came up once. Maybe we can draw them up again. I'll try to time it so I press the button for this floor after the elevator's already started."

Fracarro answered him in the same imperious tone she had used when she had asked him what he was doing. He couldn't see her but he knew she was probably gesturing as if she were rejecting everything he was saying. "I'll stand near the ladder so I can drop if he gets up here," she said. "If you don't get him going up, we can get him going down."

Edelman shook his open hand at the ceiling. He looked like a pagan pleading with his gods. "Give him time to recharge his laser," he said. "We'd better give him time to argue with the girl, too."

"Check. Ready?"

"Ready."

Fracarro swore again. Her foot stamped on the floor. "I didn't come here to play games," she screamed over the loudspeaker. "We've taken all the nonsense I intend to take. Send your hostage up or I'll blow your hairy little friend to pieces. You've got ninety seconds. If I don't see the first hostage in the elevator by then, I'll shoot him in the leg. He'll get it bullet by bullet until he's dead. You aren't the only people who can make threats."

Edelman threw up his hands. He stood under the ladder and pretended he was begging her to stop. She shouted at him to shut up in English and he backed away from the ladder and looked up wildly. The elevator door was one jump behind him.

Seconds slipped away. Down below, wherever they were, the kids were arguing. If they decided they would rather threaten to kill the hostages than send somebody up to fight, Edelman didn't know what he was going to do. He had seen an opportunity and he had grabbed it without thinking out every alterna-

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tive. Hostages were useless once you killed them and he had done everything he could to look harmless.

"Don't!" a girl screamed. "We're sending them up. Wait!"

"Hurry up!" Fracarro yelled. "First the hostages, then you. Move."

The motor echoed in the elevator shaft. Edelman pressed against the door and shook his fist excitedly. His gun hand brushed against the control panel and he pressed in the button with his knuckles.

The elevator stopped behind the door. He dropped to his hands and knees and the door slid open. A boy and the other gorilla were standing inside. The boy's eyes widened and he swung the laser beam around.

Edelman hurled himself at the boy's legs with his face turned toward the floor. The beam flashed above his head. The gorilla snarled. His shoulders crashed into a skinny body and the boy went down.

The elevator door caught on his leg. He yanked in his foot and the door slid shut. "Stop him!" the boy yelled. "Kill him. Get him out of here."

The gorilla's hands grabbed Edelman's shoulders. It yanked him up before he could pull himself away from it. He pulled up his legs and kicked it hard in the stomach. He didn't have time to be afraid. His conditioning and his basic instincts had taken control.

The gorilla grunted. The door slid open and he twisted himself around so it couldn't throw him out of the elevator. For a moment the gorilla's side was exposed to the door.

Fracarro leaped across the room. She jammed herself into the door and pressed her injector against the gorilla's thigh. The gorilla shoved Edelman against the side of the elevator and turned on her with a snarl. Its eyes glazed. Edelman kicked it again and it slid to the floor.

The boy was pulling himself up in a corner behind the gorilla. He was holding his wrist phone in front of his mouth. "Take me down," he yelled. "Stand by to repel boarders."

Edelman grabbed at him over the gorilla. He twisted away and reached inside his shirt. A stubby cylinder appeared in his hand. His thumb shoved a switch forward and a focused supersonic beam hit Edelman in the face.

A terrible ache spread through Edelman's skull. The skin on his face burned. He stumbled against the side of the elevator with his hands over his eyes and thousands of invisible whips turned his fingers into fire.

The boy swung the beam toward Fracarro. She stumbled backward as soon as it hit her and the door slid shut. The elevator dropped.

Edelman pulled his hands away from his eyes. The boy swung the

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beam around and he kicked it out of his hand. He lunged across the elevator like a man demonstrating self-defense in slow motion and the edge of his big hand collided with the side of the boy's neck. He finished the job with a chop on the back of the neck and the boy keeled over and landed face down on the gorilla.

The door opened. High, excited voices echoed against the walls of the basement. A boy and two girls were standing outside the door. They all had on gas masks and the boy had a supersonic beam in his hand.

Edelman grabbed up the beam lying next to the unconscious gorilla. The beam in the boy's hand burned his face. One of the girls yelled something about getting him for what he did to Hector and he pointed the beam in his hand at the boy and thumbed the switch forward with that terrible ache spreading through his brain again. For a moment he and the boy stood there lashing each other with invisible whips.

The boy yelled and threw up his hands. He staggered backward with his head bent over. Edelman stepped through the elevator door with the beam in one hand and a gas bomb in the other.

Half a dozen children were standing around a wheeled console that had been parked in the middle of the broad walk behind the pool. On the other side of the console, frightened eyes peering over gags, Mr. and Mrs. David Rice and their daughter Beatrice were sitting on deck chairs with their hands tied underneath the seats.

The elevator door slid shut behind him. The boy and the two girls backed away from him down the side of the pool. Every child in the room had on a gas mask. In the group around the console three boys and a girl were holding long poles as if they were lances.

A chubby boy stepped away from the console and pointed a toy rifle at Edelman's legs. "Stay where you are, Coppy. Don't move one step farther. We aren't kidding about the hostages. They've got time capsules loaded with TSA-58 sitting in their stomachs. The girl standing over there has the neutralizer. Turn around and go back, or she'll destroy every pill in that jar."

Edelman stopped. On the other side of the console a girl was holding up a double-chambered flagon. One chamber was half full of pills and the other chamber was full of some liquid and she was gripping a valve in the waist with her right hand.

Nightmares danced in his head. The gun the boy was holding looked like a spring-powered toy dart gun but the cylinder sticking out of the muzzle was a self-activating injector, not a dart. The poles all had injectors mounted on them, too, and he thought he could guess the name of the chemical the injectors

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were loaded with. TSA-58 could be manufactured in either pill or liquid form.

Edelman didn't have to fake his reaction. TSA-58 was one of the hundreds of unpleasant facts he had lived with every working day since he had become a cop, but it still made every cell on his skin cringe. A modified version of one of the enzymes used to improve IQ's, it interfered with the metabolism of the brain and flooded the brain cells with a by-product that attacked the memory cells the same way mutation-causing chemicals attacked the genes. The victims acquired false and fantastic memories and they had to be re-educated as if they were children and taught exactly what information in their heads was real and what was false. They could spend years of their lives tormented by nightmares and demons and pestered at every step by false information.

Fracarro whispered code talk in his ear. "I heard him. I assume you're going to move in on them. I'll give you three minutes and then I'll come down the elevator and toss in a smoke bomb. Tell me if you don't want me to. I've already told the dispatcher to get the neutralizer on the way. I've filled this room with smoke and I don't think they can see me. I won't use a gas bomb until you say so."

Edelman glanced at the console. One of the screens was jet black.

"Hold on a minute," he said. "I came here to talk to you. Why won't you tell us what you want? What are you trying to do?"

The boy gestured with the gun. "We'll talk when those clods out there send down a committee. Beat it. Scram. Go."

The boy, who had been waiting outside the elevator, shook his supersonic beam. The other kids stirred restlessly. "Go back to your card game," a boy yelled. "We'll call you when we need you."

"Give it to him, Petey," a girl said. "Don't be yellow. Uhuru!"

His wife's face hung in front of Edelman's eyes. How would they feel about each other if all the little memories that had shaped his personality had been destroyed?

"We can't let your parents come down here," he said. "They'll turn into animals as soon as they see you. Tell me what you want and I'll take your message back. I don't care what you wring out of them. That's your business. I'm here to make sure nobody gets hurt."

One of the boys armed with poles rapped the butt of his weapon against the floor. "Uhuru!" he yelled. "Uhuru!" The whole group looked too agitated for comfort. They had been sitting down here watching danger come closer and closer and now the authority figure himself was standing in front of them.

"Give it to him," the girl yelled again. "Show him."

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Edelman shrugged. He backed up with his eyes on the gun. "Tell me what you're trying to do and I'll tell your parents I think they'd better give in. I can see you've got us beat. You've pulled off a smooth operation."

A boy pointed at the elevator. The door slid open. Two bombs flew through the air, black smoke under high pressure hissing out of their vents.

A black cloud surrounded the kids at the end of the pool. The smoke blotted out the lights seconds after Fracarro tossed the bombs. The kids shrieked with excitement. The boy with the rifle screamed like a sergeant in a cavalry epic. "Lancers! Surround the hostages. Stand fast."

Edelman tossed a smoke bomb into the darkness. He yelled at Fracarro to stay where she was and lowered himself over the edge of the pool. Fracarro yelled back and another pair of bombs hissed across the water.

He paddled across the water through the darkness, the sonic beam held above the waves. The boy with the rifle shouted orders and four children ran down the side of the pool.

"Grab him! Hold him until we give him the needle. *Uhuru! Banzai!*"

The children ran down the walk laughing and yelling. Edelman's hand touched the far wall and he started working his way down the wall toward the end of the pool. The ventilators were pulling the smoke out at top speed but Fracarro was still throwing bombs. The darkness pressed on him like a blanket.

"Let me know if you need help," Fracarro whispered in his ear. "I'm lobbing them in every two minutes. Tell me if you need light."

His hip bumped into the end of the pool. He pushed himself away from the wall until he thought he was opposite the hostages and eased himself out of the water on to his stomach.

"What's going on?" the boy with the rifle yelled. "Where are you?"

"I can't find him," a girl yelled. "I just ran into the wall."

Edelman's left hand bumped into a shoe. A kid gasped. His hand snapped shut around an ankle and he rose to his knees. The kid yelled and he grabbed him by the shoulders and shoved him into the water.

A pole clattered on the plastic floor. Kids yelled on either side of him. "He's here! He's down here! Get back here!"

He stepped forward in a low crouch, hands close to his chest. He bumped into a figure in the dark and his hands quickly established it was either Mrs. Rice or her daughter. She grunted behind her gag and he turned left and tried to find the gap between the chairs.

Children ran down the side of the pool. Fracarro screamed like some-

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thing out of the jungle and somebody splashed into the pool. A hand clutched at his pants leg. "He's here," a boy yelled. "I got him. I got him."

"Hold on," the boy with the rifle said. "I'm coming."

He pushed the kid aside and lurched through the gap. Footsteps came at him from his left. Arms closed around his legs. A girl shrieked with pleasure. "Give him the needle. Hurry. Hurry up."

"I'm right here. Get out of the way."

Edelman's heart jumped. He threw himself away from the girl holding on to his legs and fired the sonic beam at the voice in the darkness. The boy screamed and he held the beam on the sound and prayed the batteries would last until the stupid kid fainted.

The boy backed away from him moaning. The moans disappeared in the general racket and he swung the beam in a wide arc. More children screamed in front of him. The three hostages moaned through their gags.

He pulled his knife out of his belt and squatted behind one of the deck chairs. His hands found the plastic wires that tied the hostage's hands to the chair. "Go when I tell you," he mumbled. "Crawl into the water and swim to the elevator."

He sliced through the wires without worrying if he drew blood. Somewhere in the darkness a boy was groping toward him with a big ache in his head and a needle in his hand. If he had three seconds left in the batteries that powered the sonic beam, he was lucky; if the kids had built a beam generator that could generate a beam like that for more than thirty seconds, they had done a first-rate job.

He sliced through the last wire and groped toward the next chair. His fingers brushed against a hand and he repeated his instructions and slid the blade across the bonds. At least three children seemed to be yelling and shrieking after Fracarro down by the elevator.

"He's behind the hostages," the kid with the rifle yelled. "Are you still there, Janie? I've still got the gun. Find him and I'll get him."

He squatted behind the third hostage. His hands found a large, definitely masculine hand. The fingers tightened as if they were squeezing something and he started slicing. Every nerve in his skin was jangling alarms.

A body moved toward him from the left. A hand brushed against his shoulder. He whirled and the body scrambled back.

"He's here," the girl yelled. "He's setting them free."

The boy banged against something in the dark. "I'm coming. Hold on."

Edelman threw himself flat on the floor. He pressed against the deck chairs and peered into the darkness.

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The girl's hands grabbed his thighs. "He's here. He's lying down. Where are you?"

Edelman rolled away from the chairs. He hit the girl hard with a wide sweep of the arm holding the sonic beam; she grunted and crashed into the back wall. He scrambled away from the chairs and crouched on his hands and knees like a panic-stricken animal.

"He hit me," the girl moaned. "He's near the chairs."

"Where's everybody else? Where're the lancers?"

"We're right here. What do you want us to do?"

A bomb clanged against the console. Edelman edged toward the chairs with his eyes straining into the dark. He found the chair David Rice was sitting in and sliced through the wires with two angry strokes. He shoved Rice on the shoulder to let him know they could go and threw himself against the back wall.

Three chairs scraped. Three bodies splashed into the water. The girl and the boy with the rifle yelled.

"What're we gonna do?" the girl wailed. "They'll kill us."

"Get out of here, Janie. Everybody away from the chairs. Lancers —charge! Sweep the area clean."

The girl ran past Edelman. The lancers yelled like actors in a medieval costume play and he dropped to his knees and faced the charge with his arms squeezed behind his back.

A pole rammed into the bullet-proof padding over his stomach and he twisted it out of the kid's grasp and swung it along the floor at ankle level. A kid tripped over it and went down howling. He jumped up and ran toward the far wall. Behind him everybody was yelling at once. "No more bombs," he hissed at Fracarro. "Give me some light. Take the hostages up as soon as they get there."

"They're coming out of the water now. I think everybody down here is out of play. What about you?"

"I think I can disarm them."

"I'll be back down. I'll take the kids I've got down here up with me."

He waited in the dark with the pole and the sonic beam in his hands. The kids were yelling at each other as much as they were yelling at him.

"Quit acting like crybabies," the boy with the rifle yelled. "Nobody made you do anything. Turn around and make another charge."

"What good'll that do? He's in the water with the rest of them. They're gone. We're gonna go to jail."

"My mother'll lock me up and throw the key away. Darn you, Petey. Darn you."

The smoke thinned. Five shadows emerged from the gloom. A girl yelled.

"Get him," the boy with the rifle yelled. "Charge!"

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Two kids lowered their poles and ran down the walk. Edelman gripped his pole slantwise across his chest and waited for them with his eyes on the shadow that looked like the boy with the rifle.

"Banzai!"

"Uhuru!"

"Aim for the legs!"

They stopped just before they reached him. Their poles made little circles in the air as they searched for an opening. The gas masks hid their eyes, but their knees were shaking.

He feinted at the kid on his left. The kid stepped back and the butt of his pole cracked against the pole on his right. Edelman lashed back and forth—*CLAT! CLAT!* He stepped between them and threw it at the boy with the rifle.

The boy yelled and threw up the rifle. Edelman ran down the walk yelling like a wildman and launched a long kick. The gun flew out of the boy's hands; he grabbed him by the shirt and shoved him against the back wall.

He pivoted like an hysterical dancer and pointed the sonic beam at the two girls who had been standing near the boy. One of the girls picked up the pole he had just thrown and backed away from him. "Leave me alone. Leave me alone."

The other girl howled. She grabbed the pole out of the first girl's hands and lunged.

"Get him! Kill him!"

The needle shot toward Edelman's leg. The two boys yelled behind his back. He sidestepped and danced behind the girl's back. The last seconds left in the sonic beam banged into her head and he snatched the pole out of her hands.

He kicked the rifle into the pool and stepped toward the two kids coming at him. His pole cracked like a pistol when it hit. One pole bounced off the ceiling and the other pole splashed into the water.

The two kids backed away with their hands raised defensively. One kid cursed at him. The other kid turned around and started crying.

The girl who had grabbed the pole ran over to the boy who had been holding the gun. She turned toward Edelman and raised her fist. "You toad! Why couldn't you leave us alone? What difference did it make to you?"

The elevator door slid open. The boy gripped the girl's arm. The boy, who was crying, ran up to the wall and started beating on it with his fists. "She'll never let me leave the house again. She'll spank me until I get sick to my stomach."

The boy who had been holding the rifle straightened up. "Enjoy yourself, Coppy," he said. "Someday I'll be just as big as you are and twice as mean."

"You don't have to try very hard," Fracarro said. "If he'd wanted to, he could have pulled that gun on his hip and sent half of you to the hospital as soon as he stepped

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out of the elevator. If you'd tried a stunt like this with the kind of cops they had fifty years ago, you'd probably be dead now."

"There's a police van waiting outside," Edelman said. "We'll take you up in the elevator two at a time. It's up to you. You can go with us now, or you can stay here and face your parents. You'll be arrested later anyway—you've committed several very serious crimes and we aren't going to ignore them —so you may as well come in now and be safe."

"I thought you were trying to protect us," the boy said. "You don't have much respect for truth, do you?"

"I'm offering you the best protection we've got," Edelman said. "What do you expect me to do—stand here and fight off your parents, too? I've had enough games for one night."

The boy looked around the room at the other kids. Edelman waited tensely. If they wouldn't come voluntarily, he and Fracarro would have to drag them out one by one. He hadn't risked his life and his memory just so a mob of angry parents could tear them apart.

The kid held out his hands. "O.K., Coppy. Take me away. Just make sure you never let me out. I never tell lies when I make promises."

Edelman relaxed. Behind him the other girl sniffed. The girl who was standing next to the boy turned her face to the wall and started crying.

"Let's go," Fracarro said. "Class is over." ■

IN TIMES TO COME

As most science-fictioneers know, Murray Leinster is the pen name of Will F. Jenkins. As one of the Founding Authors of this magazine —he had a novelette in Vol. 1 No. 1 titled "Tanks"—he's been a well-known science-fiction writer for quite a few years.

What fewer know is that Jenkins is also an inveterate experimenter, gadgeteer and home-workshop diddler. Next month we have an article by Will entitled "Applied Science Fiction"—explaining how he worked up one of the neatest breakthroughs in the field of photographic—and television—optics going.

He has a system whereby a projected photograph—or movie—can be used as background for photographing action in front of the screen. Sure—they've had it for years. But not this way! Not so an actor can walk in or out of a projected doorway—so an actor in

continued on page 113

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The following material is not *a parody; it is as accurate a translation as possible of precisely what it says it is—a technical paper presented before the Peking Colloquium on elementary particle physics.*

I am assured by people competent to judge that the theoretical physics in the paper is first-class work; it's decidedly beyond the interest of Analog, and it, therefore, has been omitted.

The part printed here is the introductory material—and shows with remarkable clarity the effect political pressure, and what Russians have come to call, from their own sad experience, "the cult of personality" can do.

It is perfectly evident that the Chinese scientists are not incompetents, however this political balderdash may make them appear; you don't achieve high-level nuclear technology if you're incompetent.

But with the Red Guards at work —you don't achieve anything, even survival, if you don't mouth the right phrases.

One top-rank theoretical physicist friend tells me that this paper's tone strongly resembles the material that came out of Russia in the early 1930s.

Analog prints this not as a piece of physical science, but as a piece of psycho-sociology, and as an example of real-world political science. The Editor.

Political Science
Chinese Style

PAPERS OF
THE 1966 SUMMER PHYSICS
COLLOQUIUM OF THE
PEKING SYMPOSIUM
RESEARCH ON THE THEORY
OF ELEMENTARY
PARTICLES CARRIED OUT
UNDER THE BRILLIANT
ILLUMINATION OF
MAO TSE-TUNG's THOUGHT
BY
RESEARCH GROUP OF THE
THEORY OF ELEMENTARY
PARTICLES, PEKING THE
PEOPLE'S REPUBLIC
OF CHINA
Peking July, 1966

Holding high the great red banner of Mao Tse-tung's thought, the seven hundred million Chinese people are at present vigorously repudiating the old world, old traits and old ideas, vigorously repudiating the decadent feudal, bourgeois and revisionist ideologies. In the course

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of this unprecedented, great socialist cultural revolution, we the group on the theory of elementary particles, are going through a process of destroying the old and constructing the new and have embarked on the road of scientific research under the guidance of Mao Tse- tung's thought. We present to you in this article an account of the experience and understanding that we have acquired in studying and applying Mao Tse-tung's thought to scientific research work.

Take Our Own Road

In the more than ten years after liberation, research work on the theory of elementary particles had been started from scratch in our country. In the field of the theory of knowledge and methodology, not a few of us were, for a period of time, restricted by the metaphysical and idealist ideologies of the West and were affected by the blind faith. To have suffered is naturally a bad thing, but it gave us a lesson and awakened us.

Under the leadership of the Chinese Communist Party and in adherence to Chairman Mao Tse-tung's teachings on emancipating the mind and breaking down blind faith, we armed ourselves with Mao Tse-tung's thought and conducted a systematic investigation, analysis and criticism of the history of modern physics in the first half of 1965.

Numerous facts in history showed us that a correct world outlook is of primary importance to a worker of natural science. The useful contributions that some scientists in history were able to make were the result of a conscious or unconscious reflection of naïve dialectico-materialist ideologies. But they were often unable to resist the corruption of bourgeois philosophical viewpoints. Once they fell into the mire of idealism and metaphysics, they would go straight into a blind alley, incapable of making any valuable contributions in ten or twenty years, or, even, in their remaining years.

We have noticed that not a few scientists, although conscientiously undertaking scientific research, had traversed many tortuous paths and their redoubled efforts were often rewarded by only half the result, because they did not have the correct world outlook and methodology. Take the German physicist Planck for instance. He advanced the quantum theory as early as

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1900, but later his metaphysical world outlook led him to doubting his own theory. In the fifteen years after Planck advanced the quantum theory, the correctness of the view of this theory had been borne out by the studies on photoelectric effect and on the specific heat of the solids as well as the advancement of atomic structure, et cetera. But Planck had shut his eyes and turned a deaf ear to all this. Only till 1915 was he compelled to admit that the road he had been following for fifteen years was a dead end.

Through this investigation, analysis and criticism of the history of modern physics, we have broken away from the superstitious beliefs in Western authorities, and at the same time, criticized the erroneous idea which negates the guiding role of philosophy in natural science. We are firmly determined to arm our minds with Mao Tse-tung's thought, explore the path of research on elementary particles and take our own road.

The Old Must Be Destroyed Before the New Can Be Constructed

In order to "take our own road," it is necessary first of all to establish a correct world outlook. Here, a correct approach towards the relationship between politics and professional skill is of paramount importance. Natural science as a kind of social practice always serves politics. It serves the interests either of the masses of the people or of the exploiting classes. The scientific workers of our four continents should regard scientific work as a component part of the revolutionary cause of opposing imperialism and colonialism. They should serve the cause of developing the science and culture of their own national independence, defending world peace and promoting human progress.

By "taking our own road," we mean learning to apply the correct theory of knowledge and methodology. All sorts of idealist and metaphysical viewpoints of the bourgeois have now become serious obstacles to the development of natural science. Particularly with the continuous deepening of the general crisis of the capitalist world and the daily decline of the Western bourgeois culture, positivist ideology and mathematico-idealist ideology have gradually but widely spread in the research on the theory of elementary particles.

The positivists advocate that the only reliable knowledge is that of the sensations and experiences, and that all the essence behind the empirical facts is unbelievable fabrication.

The mathematico-idealists regard mathematical formalism, describing the law of motion of matter, as the primary thing, while matter itself is of a secondary nature, and they hold that all things are controlled by mathematical equations. As the relations between

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the empirical facts are expressed in terms of mathematical equations in very many cases, the positivists also enter into alliance with the mathematico-idealists.

Under the influence of these idealist trends, the following two erroneous views on the elementary particles spread among the majority of Western scientists.

According to the first view, all the more than one hundred kinds of elementary particles are regarded as elementary, and there does not exist any deeper stratum in the structure of matter. G. F. Chew of the United States is the representative of the physicists holding this view. He inherits from the old positivist Heisenberg the dogma that the objectives of investigation in physics are only various kinds of "observables" (concretely speaking, they are energy levels, decay lifetimes and cross-sections). The function of the so-called "theory" is simply to find a recipe for calculation which gives the correlation among these "observables." He also preaches from time to time that in order to build up the theory of S-matrix and explain all strong interaction phenomena, it is sufficient to use only the postulates of the Lorentz invariance, the unitary condition, the causality condition and the so-called "maximal analyticity."

The absurdity of the view of Chew and others originates from their attempt to discard the objective essence of the thing and to solve the problems of the elementary particles by using only the relations among superficial phenomena or by imposing some condition of pure subjective conjecture. Precisely because of his erroneous viewpoint, Chew has suffered one failure after another in his practice of scientific investigation. This is the unavoidable lot of those who stick to the positivist and mathematico-idealist view.

Now let us come to the second view. People holding this view avoid the question of whether there exists any structure of deeper stratum, and admit only the relations between particles, while denying these relations as the reflection of anything essential. We call this theory the phenomenological theory of symmetry.

In fact, the theory of symmetry was first advanced in 1959 by Shuzo Ogawa of Japan in accordance with the view that the elementary particles have structures, that is, the view embodied in the Sakata model, some of whose predictions were experimentally proved to be true. This fact should be regarded as an important clue to the internal structures of the meson and the baryon. However, many Western scholars, guided by positivist thinking, have gone in the opposite direction. For example, Cell-Mann of the United States proposed the "quark" scheme in 1964, tentatively saying that the

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"quark" is something more fundamental, but he added immediately that the "quark" is only a kind of mathematical entity. In the last two years, similar views are often to be found in the Western literature on the elementary particles. They hold that the "quark" is no more than a mathematical symbol, and they do not admit the existence of entities inside the elementary particles, which are more fundamental than the elementary particles.

This reminds us of the situation at the beginning of the twentieth century. At that time, a large group of physicists denied the existence of the atom and declared that the concept of the atom is only a kind of "working hypothesis." This situation is surprisingly similar to that obtaining now. Led by the trend of positivist and mathematico-idealistic thinking, many Western scholars exaggerate the worth of the theory of symmetry while working on such theory. They regard all phenomena as the consequences of certain symmetries. In such theoretical studies, they investigate only formally all kinds of groups, group representations and symmetry breakings; they even blindly embark on the continuous extension of the symmetry group. But they never consider seriously what essential things those symmetries and symmetry breakings reflect. As a result, mathematics has become more and more complicated in form, and physics more ambiguous in content.

Therefore, with the guidance of Mao Tse-tung's thought, after having analyzed and criticized the positivist and mathematico-idealist views of the West, we must penetrate through the various kinds of complicated phenomena and reveal the inner essence of the elementary particles.

"How Can You Catch Tiger Cubs Without Entering the Tiger's Lair?"

Then, how are we to penetrate through the various kinds of complicated phenomena and reveal the inner essence of the elementary particles? We have studied Chairman Mao Tse-tung's celebrated philosophical works "On Practice" and "On Contradiction", and learned very much about the theory of knowledge and about methodology. We hold: First, the theory of the elementary particles can start only from scientific experiments and must be tested by scientific experiments; and secondly, we must understand the motion from the viewpoint of "one divides in two." To continuously reveal contradictions in the course of practice and Guide the practice with the view of continuously revealing and resolving contradictions, this is the basic spirit of our methodology.

The original material continues in this vein for another twenty pages of typescript which seems to me to be redundant for our purposes.

The Editor.

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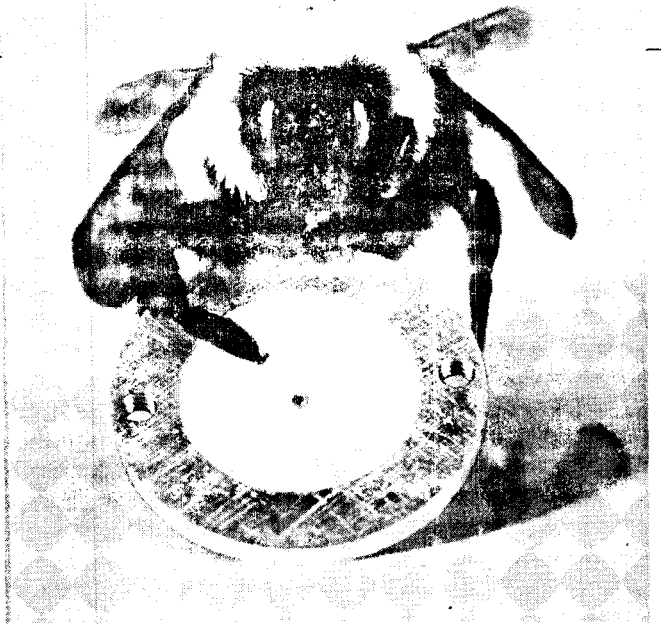

WE'RE GETTING THERE!

Dr. Carl Larson's recent article, "Microminiature Industry," compared microminiaturization of human technology with the picominiaturization achieved by living forms.

Above we see a bumblebee and the new Barnes Engineering Co. (Stamford, Connecticut) infrared detector. The black dot in the center is the active detector, designed for use in space satellites as an Earth-horizon sensor.

We do still have some way to go, for it must be acknowledged that each of the bumblebee's eyes is made up of tens of thousands of individual sensors, each approximately equivalent to the germanium immersed infrared detector.

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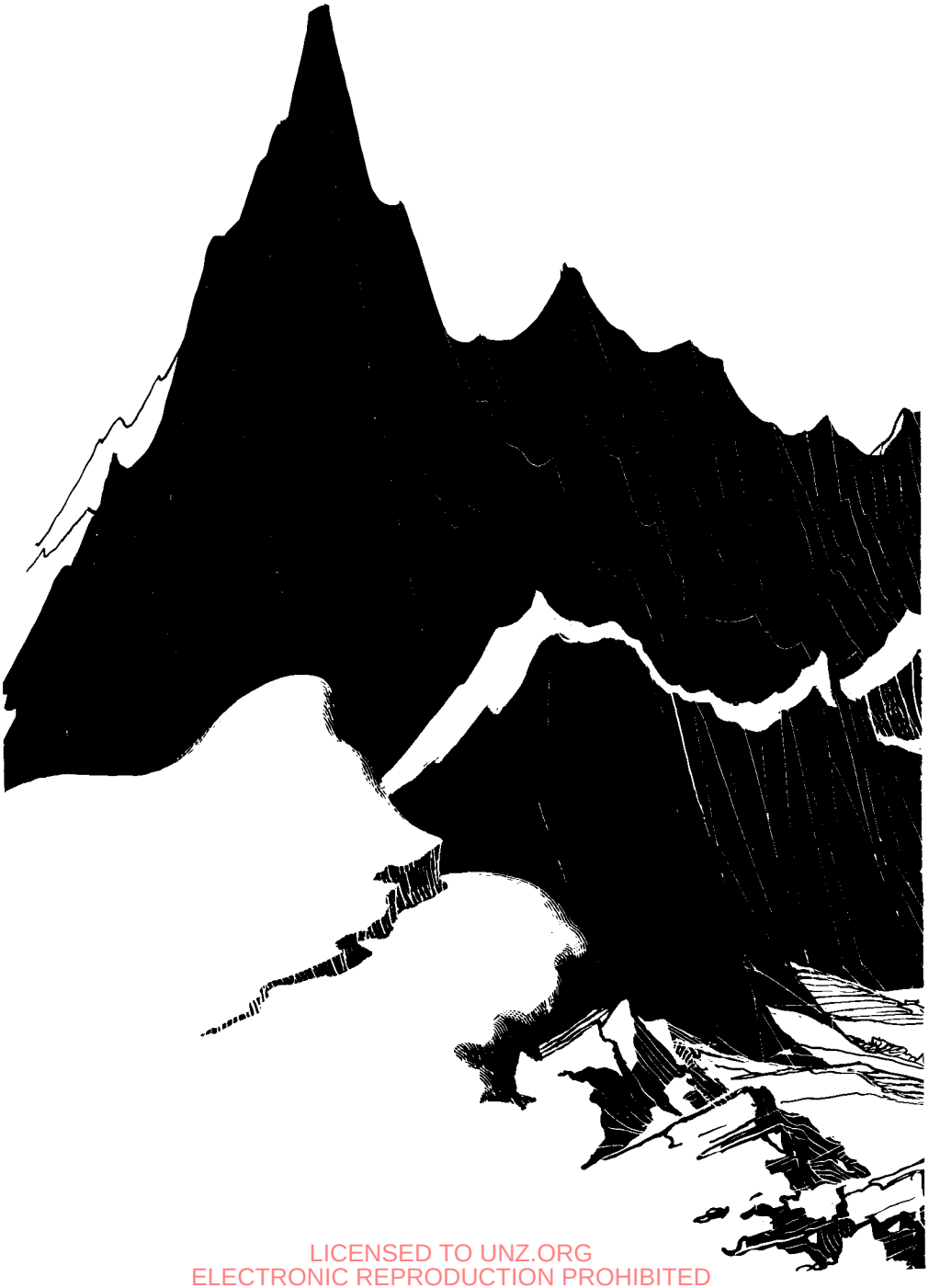

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THE JUDAS BUG

There was something most exceedingly subtle, and exceedingly deadly on the planet—and somebody was using a remarkable weapon. The worst of it was that even the victims didn't know how they'd been killed . . .

CARROLL M. CAPPS

Illustrated by Kelly Freas

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These were the first deaths on Trancour since Phase Two of the Expedition had arrived, nearly a year ago. Technical Sergeant (Mechanic) James Gruder, who'd come out with Phase Two, stood in a circle of shocked onlookers and watched the two bodies being lifted from the cargo hopter that had brought them in to Base. Someone beside him muttered, "God!"

Whatever carnivore had been eating at them hadn't got to the point of tearing off their uniforms, but had concentrated on faces, throats, and hands. The man beside Jim made a peculiar sound, turned, and hurried away. Major Lockerby, who'd flown the cargo craft, snapped, "Get something and cover them up!" Jim heard boots crunch on gravel as someone started to Supply to get tarpaulins.

Lockerby, the Expedition's Exec as well as its Medical Officer, reached into the pilot compartment and pulled out two Class A power cells. His thin, darkly-tanned face was ugly as he looked around the circle of men. His eyes fell on Jim. "They were flying Two Dash Nine. Who serviced it yesterday?"

Jim, as horrified as the others, forced himself to think. "Why . . . I serviced Two Dash Nine myself."

Lockerby turned the power cells end-for-end so the bottoms pointed toward Jim. On each was a dime-sized spot of bright red.

Jim stared at them in disbelief. Finally he said, *"Exhausted?* Those can't be out of Two Dash Nine! I put fresh ones in not five days ago!"

Lockerby said unpleasantly, "You'd better be ready to prove it. Meanwhile, send somebody out with fresh cells to bring Two Dash Nine in." Deliberately, he turned his back.

Jim, bewildered and shaken, turned slowly toward the hopter pool. Behind him he heard someone say in a low voice, "And Gruder was always chewing Rinette out for being careless." He resisted the impulse to turn. It was true, he thought dully—Jacques Rinette, one of the dead men, had been a fine mechanic but impatient with the meticulous double-checking of everything. And, if he were dead now as a result of Jim's carelessness . . .

No. He *knew* those cells had been fresh five days ago; and all right yesterday afternoon. Pulling his visor cap down to shield his eyes from the potent morning sun, he increased his pace.

The hopter pool was on the upland side of Base, in the lee of a cliff for shade and for protection against storms from the south. A hangar had been chopped and melted out of the cliff. Just outside it, four men were hoisting the canopy from a two-place hopter, to get at a dent in the wing. Ernie Reik, a stayover from Phase One like Major Lockerby—but, unlike Lockerby, a civilian—was overseeing the job. Jim hesitated. With Rinette gone, he

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ought not to take Reik away; but just now he didn't feel up to the company of a younger man. "Anything important doing?"

Reik—slight, gray-eyed, and like all the four-year veterans of Trancour, deeply tanned—pulled off his visor cap and brushed at his cropped brown hair. "No. Did you see him?"

Jim nodded curtly. "Bryant, too. You can hardly tell them apart. Get a two-seater ready, will you, while I pick up some power cells? We've got to bring in their hopter."

Three-quarters of an hour later, Jim leveled off the hopter they were flying. Below, the summit of a narrow, but fairly high, mountain range shot rearward. He muttered to Reik, "I'd better call Base," and reached for the hand mike. "Base, this is Two Dash Four. James Gruder piloting."

A voice came back, "Two Dash Four, go ahead."

"Who's speaking?" Jim asked.

"Ken Mapes, Sarge. I've got switchboard duty."

"Oh, Ken. We're about to drop into Elm Creek Valley. Before we lose contact, have you heard anything more about last night? We left without talking to anybody."

Mapes said, "There's a lot of talk around. They weren't in the hopter. They'd walked a couple hundred yards to Elm Creek, and were lying on the mud. They weren't even close together."

Jim stared at the mike. "You mean they walked away from the hopter, in the middle of the night and the middle of nowhere? Did they have the survival kit with them? Did it look as if they were trying to walk to Site Eighteen?"

"No survival kit, no flashlight, no nothing; and their tracks were separate. Their needle pistols were in their pockets, with the flaps buttoned."

Ernie picked up the other mike. "They didn't even take the *flashlight?*"

There was a pause. When Mapes spoke again he sounded embarrassed. "It looks like there wasn't any in the hopter. Somebody found Rinette's pocket lighter in the grass. They evidently used it to see by, when they got out and checked the power cells."

Jim said savagely, "Oh, come on! None of that makes sense!"

Mapes said, "I'm only telling you what I heard. And if you believe that scroop about guys suddenly going completely nuts and killing themselves . . ."

Jim twisted around toward Reik. "*You* were here, Ernie. Do *you* believe it?"

Reik only hesitated a moment. "One may have, but not both."

Jim looked at him for a second, then said into the mike, "Anything else, Ken?"

"No. Except you're going to have to stand a hearing."

Jim grunted. "That's no surprise. Thanks, Ken. Out."

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He swerved the hopter around a peak with patches of snow still on its shady northern side, and squinted to see forward. If Rinette and his teammate Russ Bryant had lost power over this part of the range and had to glide into the valley, a notch a little to the left would have been the best chance. Rinette might have found it in starlight—he knew the route, certainly. Jim veered and let the hopter slant down through the notch. A lot of this range was bare rock; where it wasn't, forests of the spreading, sparsely-needled Trancour equivalent of pine made powerless landing impossible.

The notch widened. Ahead and several thousand feet lower, the level floor of the valley came into sight, yellow-green with the Trancour grass, split by the snaking dark line of trees along Elm Creek. Site Eighteen—not manned, but with light-installations—was eight or nine miles downstream to the right. With any gliding altitude—though a grav-hopter had a steep glide since its wing area was for maneuvering, not lift—Rinette would have headed that way. The cardinal rule was, in such an emergency, get to where there was light.

Jim turned down-valley, at about two thousand feet over the creek so he could see to either side of it. Sooner than he expected, he saw the downed hopter ahead, on the right side of the creek. Rinette must barely have made it into the valley. He slowed and hovered over the spot on gravs, looking down through the belly-window.

Two Dash Nine, like the hopter they were in, had an outline, seen from above, like a considerably-truncated equilateral triangle, except that the airfoil's leading edge —the base of the triangle opposite the truncation—was swept back slightly on either side. The tail—the truncated edge—was part of the whole integral foil. Where the gap between tail and wings would have been was the perforated section that acted as a spoiler and helped the craft fly like an airplane rather than a pancake. The cockpit—two seats side-by-side, with baggage space behind them, all under a canopy—was set in the middle of the foil. The windshield slanted from just behind the leading edge. Looking down on the craft, the meagerness of wing-area was accentuated. Grav drives, or the power cells for them, weren't expected to fail very often.

Two Dash Nine hadn't nosed over; Rinette had slid her down neatly so that the belly-pads—designed for vertical hovering landings—made a clean, gradually-deepening furrow. She'd skidded sideways at the last, but not violently, and she'd hardly been dented.

The area immediately around the hopter was trampled, and there was a flattened spot where a rescue hopter—not the cargo one, but another two-seater—had landed. Two sets of tracks in the grass, separate

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and not entirely straight, led away from the spot, toward the creek. Those must be Rinette's and Bryant's; there were no others. That puzzled Jim, until, seeing the signs, he said to Reik, "Oh. The cargo hopter landed near the trees." He slanted down that way, landed at the same spot, and sat musing for a moment before sliding back the canopy. "Shall we have a look at where they were found?"

Reik nodded.

The grass grew to the edge of the drop-off into the bottom-land. In that bottom-land grew the elmlike trees that gave the creek its name; thickly, a dismal grove even in daylight. At the edge, the cargo hopter, summoned by the earlier search craft, had set down. Now that he was here, Jim could see that the search craft—or another two-seater—had also landed here. He pointed that out to Ernie Reik. "They must have caught the tracks in a spotlight, followed them this far, and set down. Then, when they found the bodies, they lifted high enough to radio Base, then came down and landed beside Two Dash Nine."

Reik nodded slowly. "That's the way it looks. They probably didn't want to go back to the creek without reinforcements. What time did the cargo hopter get here, do you know?"

Jim said, "Figuring the arrival back at Base, and assuming it left here right away, near sunup."

"Not with Lockerby in command," Reik said. "Once he found they were dead, he'd let them lie while he investigated everything else. He'll pin it on you if he can."

Jim sat brooding for a moment. "Ernie, I *know* I wouldn't pass over two dead cells. Check-over is second nature with me by now. And that talk about the flashlight—if one wasn't in the cockpit, the empty clip would stand out like a loaf of bread."

Reik said, "I suppose the charge will be that you didn't check the cells, or the cockpit either."

"Yeah." Jim climbed out onto his side of the wind. "Let's go."

Among the trees, the dank smell of the creek replaced the sweet one of the grass. The tracks—of many men, now—led to the screen of reedlike stuff along the water, and through it.

The bodies had been fifty yards or so apart. Creek-mites—dime-sized, ten-legged—scuttled about both spots, as if scavenging for bits of flesh. Jim shuddered. "Let's get out of here."

They took off and settled again beside the stranded hopter. Jim, two fresh power cells in his left hand, climbed out and walked to the front of Two Dash Nine, bent to lay one of the cells on the wing, and straightened again to stand staring thoughtfully at the other.

A Class A power cell was about nine inches long, two inches in diameter; a smooth gray cylinder ex-

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cept for the pair of curved slots in the top end that would take connecting prongs, and, with a twist, secure the cell in place. He didn't know much about the nuclear processes involved, but there was a controlled fission such that current could be bled off as desired, the cell being practically inactive when no current flowed. Various apparatus used this same cell.

In the case of a hopter, converters would turn the direct current into A.C. of several frequencies, to run the craft's gravs and to power landing lights, searchlights, cockpit lights, the air-conditioning, radio, and whatever outside apparatus the craft might hook up to. One fresh cell—let alone the pair—should run a hopter with everything turned on, plus anything else within reason coupled on, for over five hundred hours. When a cell was ninety percent depleted, an automatic reaction caused the red warning spot to appear on the bottom.

He was as sure as he was of anything that he'd put fresh cells in Two Dash Nine five days ago.

The small ports into which the cells fit were in the leading edge of the wing, protected by the tough rubber bumper. He loosened the eight quick-fasteners on that, removed it, and opened the ports. They were empty. He slid in one cell, pushed, twisted, and felt it click into place. Why this model hopter had cellports where they were, instead of in the cockpit like the cargo hopters, he couldn't guess. Maybe somebody had been squeamish about having so much compressed energy in a cockpit.

Ernie Reik was standing beside him. "I thought of something."

"What?" Jim asked.

"Jim, I don't doubt you checked the cockpit; and Bryant, if not Jacques, would have given it a quick check before taking off. Suppose the flashlight was there, but had a bum cell in it?"

Jim tried to keep his voice calm. "Hell; he'd have pressed the stud to make sure it lit. Who can pick up a flashlight without doing that?"

"Maybe so," Reik said, "but a cell goes out suddenly. Even a Class C."

Jim said impatiently, "O.K.; it *could* happen. But wouldn't it be quite a coincidence for the two Class A's, and the Class C in the flashlight, to go at the same time?"

Reik blinked, pulled off his cap, and brushed at his hair. "Yes. Too much of a coincidence." He looked at Jim puzzledly. "What's *your* theory?"

"My theory is—" Jim began hotly, then stopped, astounded at the implications of what he'd been about to say. Finally he finished, "I just don't know." He stepped onto the wing and pushed back the canopy. "I'll fly this crate back, since I seem to be responsible."

Reik gave him an odd glance, but said, "O.K.," and walked to the other hopter.

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Over the mountains, Jim cut the forward grav-drive slightly and let Reik move a little ahead. It wasn't rational, he knew, but he just didn't want anyone looking at him now.

His left hand rested on the empty clip where the flashlight should have been. A standard cockpit flashlight was about the size and shape of a Class A cell; not too easy an object to lose. Of course the Class C cell inside it had only a tiny fraction of the energy of a Class A; still, it lasted a long time, and his check-off sheets included a regular inspection of all flashlights.

The ugly thought was still in his mind. Suppose someone wanted to kill Jacques, or Bryant? It had, obviously, only been by thorough knowledge of the mountains and by perfect piloting that Jacques had made the valley at all; and they *had* died there. It would be easy enough to sneak to the hopter pool at night, between Rinette's regular afternoon circuit of the four Elm Creek sites and his midnight one, and to replace the cells in hopter and flashlight with nearly-dead ones. It would be cutting it fine to judge just how much residual energy would be needed to lift hopter and crew to the summit, then give out. Still, figuring headwinds and whatnot, it could be done.

There was a very simple way of measuring the energy left in a cell—you weighed it. The gross weight of a new cell, and the net weight of fuel in it, were controlled down to a few milligrams. As the fissionables were used up, the net weight went down in strict proportion.

No, that was too fantastic. Jacques, with his quick laughter, had had equally quick bursts of anger, but there was no rancor in it and everyone had liked him. Russ Bryant, younger and less colorful, had been popular enough, too. It was crazy to build a theory like that around a missing flashlight. Without that coincidence, there could probably be some rational explanation—though Jim couldn't think of one—why the two Class A's had failed.

It suddenly occurred to him that the flashlight might simply have jarred loose in the landing, and still be in the cockpit. Excited, he bent to feel under his seat. His fingers touched something sticky and unpleasant, and he jerked them away. Setting the controls, he got to a kneeling position on the floor and bent to see what he'd touched.

It was only a col—one of the big beetlelike insects that were always squashing on the windshield at night. This one was dead and partly squashed, as if someone had sat on it or put a foot on it, not too heavily. He slid the canopy open an inch, got his knife out of its sheath, and lifted the thing on the blade. He had to use the other hand to get it out into the slipstream, and when he was rid of it he wiped his fingers on his zipperalls, shuddering a little. The things were supposed to be harmless, but gave him the creeps.

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As he'd bent low, he'd seen some other small object, far back under the seat. Now he got it out and sat looking at it, puzzled.

It seemed to be a slip-on filter for a camera lens; one of the spring-fit type with a screw-on flange to hold the actual filter, which in this case was dark blue. Photography was not one of Rinette's hobbies, or Bryant's either, so far as Jim knew; and the hopter had been assigned to the pair since Rinette had volunteered for the run, two months earlier. Well, one of them might have given someone else a lift. He slipped the filter into a pocket and let his mind go back to the tragedy.

Why had they left the hopter, flashlight or no? One or both of them might have been stunned, of course, and wandered a few steps. But there was the matter of Rinette's igniter, found at the front of the craft. He wished he could have been the first one there, to see whether the bumper was off and the cell ports open. The major, or someone, might have closed them later.

That the two men hadn't gone in a pair suggested that one had gone first, and the other later, to look for him. Had they quarreled? Not likely. Another possibility was that they'd intended hiking to Site Eighteen and felt they'd be safer among the trees, or close to the creek.

A small red bulb began flashing on the panel. He reached for the hand mike. "Two Dash Nine. James Gruder."

"Sarge? This is Ken Mapes. Colonel Werthen wants to make sure you get back pretty soon. They're starting a hearing right after lunch."

Jim glanced at his watch. "I'll be there."

Colonel Nils Werthen, bulky and blond, who had come out with Phase Two to take charge and who obviously wasn't finding the Trancour summer very comfortable, reached out a heavy sun-reddened hand to adjust the sound recorder on the rough wooden table. His pale blue eyes were neither harsh nor friendly as he looked at Jim. "This is not a formal court-martial, but it will be conducted like one to assure you all rights."

What that meant, Jim supposed, was that Werthen didn't want some Review Board on Earth—half a year away by the fastest message—carping at procedures later. "I'll waive any technicalities," he said, knowing he sounded sullen.

Werthen nodded. "I believe there's something you don't know, since it happened this morning while you were away, so we'll hear about that first. As a result of your claim that you put fresh cells in hopter Two Dash Nine five days ago, Major Lockerby ordered a spot check of all the new cells in Supply." He looked toward a dark, lanky man standing to one side of the table. "Corporal Narva, will you describe the findings?"

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Narva, a little flushed, glanced at Jim, then back at the colonel. "Well . . . out of seven hundred and nineteen Class A's in stock, two hundred and twelve were bum. The rest were O.K."

Major Lockerby, seated beside Werthen, put in coldly, "You'd better explain what you mean by 'bum,' Corporal."

Narva scowled, mustering words. "Somebody opened the storage capsules and stole the new cells and put partly used ones in. Then sealed the capsules up again and put them back in the shipping cases."

There was a long pause. Jim sat stunned and bewildered. Finally Werthen prompted Narva, "And that could only have happened on Earth, before shipment?"

The storekeeper's eyes flicked toward the recorder. "Well, it's hard to see how it could have been done anywhere but in the factory. There's a self-adhesive tape around the capsules, and the inspector's stamp was on that."

Werthen looked disgusted. The storekeeper evidently hadn't qualified his opinion before. "Is there some doubt in your mind, Corporal, whether the thefts occurred before we received the cells?"

Narva looked startled. "Uh . . . no, sir. No. I don't think anyone could reseal the capsules and get the tape to fit perfect, with the inspector's stamp and all."

"All right," Werthen said. "Now when James Gruder last drew cells from stock did either he or you examine them in any way?"

Narva glanced at Jim again. "No. I took them out of the packing cases and gave them to him, and he signed the requisition and carried them away."

Werthen sat for a moment, slowly turning a pencil between his blunt fingers, then said, "That will be all, Narva. Unless Sergeant Gruder wants to challenge the last part of the testimony."

Jim ran his tongue over dry lips. "No. It's . . . accurate."

Werthen nodded in satisfaction. "We'll hear next from Dr. Pell, so he can be excused as soon as possible."

The Expedition's chief scientist got to his feet, wincing a little. His legs must be bothering him again. He was of medium height, moderately plump, deeply tanned. His hair, what was left of it, was graying; so was his bristly little moustache. Round steel-rimmed eyeglasses made him look a little owlish.

Werthen said, "Doctor, there's no need for you to stand." For the recorder, he added, "Dr. Pell, who elected to stay over from Phase One, suffered burns about the lower legs in a laboratory fire some time ago and is still troubled. Doctor, you supervised the autopsies this morning. What did you determine was the cause of death?"

Pell sat down with murmured,

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"Thank you." He seemed in actual pain. "Al-almost certainly, loss of blood. Their throats had been torn open."

"And you've stated they were undoubtedly killed by carnivores?"

A grimace, and a deep sigh. "Yes. Yes, I have."

"Doctor, we'll only keep you a minute more. During Phase One, several men were killed or attacked by predators in Elm Creek Valley, were they not?"

"Yes."

"And one species in particular was responsible?"

"Mainly." Pell's hands were slowly clenching and unclenching. "We called them 'thylacines'. They're nocturnal, and . . . very clever. We were never able to take a specimen alive, and—and rarely saw them. However, we . . . Ah, a determined campaign succeeded in killing a few, and the others vanished from the valley. That was a Trancour year before . . . before Phase Two arrived."

"Maybe they're back," Lockerby put in.

Werthen said, "Thank you, Doctor. If the accused has no questions, you may go now."

At Jim's negative head-shake, the biologist arose painfully. "Thank you. I believe I'll take a sedative and lie down."

There was much other testimony, but it meant nothing to Jim. The afternoon dragged on. He sat woodenly, unwilling to show his inner turmoil. If the cells he'd put in Two Dash Nine five days ago had been partly exhausted . . . He was no longer sure of anything.

After an eternity the parade of testimony ended. Werthen looked at Jim. "Do you have anything to say, Sergeant?"

Jim stirred himself. "No, sir." His voice sounded heavy; lifeless.

"In that case," Werthen said, "please wait in the outer room."

Jim paced listlessly or stared out the window. Over in the barracks area he could see men walking singly or in groups toward the mess hall. He remembered, now, that he hadn't eaten lunch. But the hollowness inside him was not hunger.

Finally the inner door opened and Lieutenant Kroll, the third member of the Summary Board, beckoned to him. He went in, stood straight and as woodenly as he could, and listened to the colonel. "James Gruder, this Board finds you guilty of criminal negligence contributing importantly to the deaths of two men. Vote, unanimous. Punishment is set as follows: You will be reduced to the rank of Private First Class, with all attending pay reductions and loss of privileges. Vote, unanimous.

"Within the next few days, as soon as a cargo drone can be fitted with living facilities, you will be sent to Earth for reassignment. Vote, unanimous.

"In view of your past record of competence and reliability, you are

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granted a special reprieve. Until the day of your departure you will retain your present rank and duties, and, providing such duties are not interfered with, you may search for any evidence or circumstances that may mitigate your guilt. All personnel are directed to cooperate with you, within reason. Vote, two to one. Have you anything to say?"

Dull anger stirred Jim's apathy. No one had yet made the warp-trip between Trancour and Earth. Men had made such trips from closer planets to Earth. From here, it would be half a Terran year via no detectable universe; sealed in a single chamber with the bare minimum of food and facilities. The trip was miserable enough in a big transport, with other men around you and with every possible arrangement to keep you alive and sane. The men who'd made warp-trips in cargo drones—if they were able to talk about it sanely—said that after a few hours you prayed and cried for someone to come along and hammer on the outside of your steel prison, or for a meteor to hit it. But there were no meteors in warp; nobody and no hammers.

Werthen repeated impatiently, "Have you anything to say?"

"No." Jim didn't even add, "Sir."

Because a man had to eat to stay alive, Jim walked slowly toward the mess hall. The men still eating looked up as he entered. One or two spoke to him awkwardly and he answered without thought. He got a trayful of food and forced some of it down, then left and, for want of anything else to do, walked toward the hangar.

The day crew was already gone, but Ernie Reik was still there, waiting for him. "Message for you, and I thought I'd better not relay it. The Duty Officer wants you to inventory Rinette's things. There'll be a cargo warp to Earth in a few days, and they want to send his stuff to his family."

Jim opened his mouth furiously, then caught himself. Probably Ernie didn't know yet that Jim would be on that same cargo drone; neither did the Duty Officer, whoever he was. And Jim *had* been Rinette's sergeant. "O.K.," he said. "Thanks for waiting."

He walked about the hangar making sure everything was proper, and brooding on the irony of the request. No work was under way; the night crew was in the ready-room with a game of cards until they were needed. He picked up an oily rag someone had left on a wing; carried it over to the safe-can and dropped it in.

Why had Rinette volunteered for that run, anyway? His corporal's pay, tripled for Space, was pretty good. He'd told Jim he wanted extra money to send home; maybe there was a good reason. Well, there'd be money now—the insurance.

He told the night crew he was leaving, walked to Rinette's bar-

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racks, got a key from the master-at-arms, and opened the dead man's locker. There wasn't much in it. Two extra zipperall suits, socks, underwear, Rinette's older pair of boots, toilet articles, a hat with a wider brim than the regulation one. A picture was pasted inside the door. That would be Rinette's parents, and the younger sister. There were some other pictures inside the locker; pinups. On the top shelf was a little pile of PX script, weighted down with a nugget Jacques had picked up somewhere on Trancour, and two books from the Base library.

On the lower shelf were some pieces of thick stiff leather, which Jim recognized as being for the handle of a hunting-knife Rinette had been making. The knife wasn't there. Jacques had sometimes locked up personal stuff in a tool chest at the hangar, so before making a list Jim started back there for the knife.

It was where he expected, along with a pamphlet bound in stiff yellow paper, and a rectangle of thin blue plastic from which some circles had been cut. A thought suddenly struck him. He laid the pamphlet aside and fished with excited fingers in his pocket for the camera filter he'd found. Yes, the two layers of plastic had come from here. He puzzled over that as he slowly put the filter beside the other things. Had Jacques been making it for someone? Probably.

He picked up the pamphlet and read the title: "The Pseudocoleoptera of Trancour (Lystra V). A monograph by Dr. Eugene Pell."

His skin suddenly prickled. "Pseudocoleoptera" was the name Pell had given to the large nocturnal insects—"cols" for short—a specimen of which Jim had found squashed in the stranded hopter. Fingers shaky, he flipped through the pamphlet. He'd read it once, without much attention, and he saw nothing now to explain Rinette's having the pamphlet. Casting a quick look around to make sure no one was watching, he slipped it into a pocket to read more thoroughly later.

First, he wanted to go over the logs and flight records for Two Dash Nine, and read Rinette's routine reports. If Rinette and his partner had been spending time studying the cols—and it looked very much that way—there ought to be some discrepancy in the records. He strode to his small cubicle of an office, latched the door, and pulled open desk drawers to get old ledgers.

It was there, when you knew what you were looking for and compared Rinette's night trips with his day ones, and with earlier men's night trips. Jacques, and presumably Russ Bryant, had been spending a half hour or more per night somewhere in the vicinity of Site Eighteen. That was the first trap installation in the Elm Creek route; the one they'd have visited first if their power hadn't failed.

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He went through Pell's monograph once more, looking for some hint, unsuccessfully. Well, the biologist was the expert—why not see him? Maybe he'd feel well enough to talk to Jim in the morning.

Doc Pell's legs evidently weren't bothering him at all this morning. He fairly beamed at Jim through his round eyeglasses. "Beetles, eh? That's an improvement! Nearly everyone wants to call them 'bugs'. The bugs are a specific order of Terran insects, you know—the hemiptera." He got up from behind his desk. "Come." He led the way from his office down a corridor, through a light-trap, and into a dimly-lit room.

Jim stopped in surprise. The light, from several small bulbs, was blue.

Pell said, "Your eyes will adjust in a minute. The cols are over here in the corner. Excuse me." He went to a sink, turned on a tap, rinsed out a beaker, filled it, and drank. "Terrible thirst this morning; must be the sedative I took. Well. Is this the species?"

"Yes," Jim said. The cage was a good ten feet square, of wire mesh upon which crawled several of the inch-long beetles.

"I call this the Blue Room," Pell said, smiling owlishly. "Any longer wavelength of light, including the infrared, would send all the insects in this room scooting to their nests, but they're blind to this. Here. See this col with the numeral Four painted on his back? He's the oldest specimen we have. He was mature when Phase One arrived, so he's at least six years old. You say you found a dead one in Rinette's and Bryant's hopter? Why do you think that may be significant?" He poked a finger at one of the insects inside the mesh. "The bite isn't poisonous, you know. Not even painful; just a pinch. You can try it if you wish."

"No, thanks, Doctor. What I had in mind was that a man grounded on a dark night could panic if he were bitten by one, and still heard it buzzing around. Suppose, for instance, that happened to Bryant and he ran for the brush, and Rinette went after him. Or, I had another thought—do these things ever swarm?"

The biologist blinked at him from behind the glasses. "Oh, no. See how they avoid each other here in the cage?"

There were at least a dozen of the things crawling around, Jim saw now. Whenever two got within a foot of each other they turned aside. He watched the one numbered "Four" close its mandibles upon a strand of the wire, as if trying to bite through it.

Suddenly another of the things took to the air, buzzing loudly, and flew across the cage to a mass of what looked like black sponge rubber. Immediately upon landing, it squeezed into some invisible opening and disappeared. Doc Pell was beaming. "That's Six; he's been

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cross about something for several days. Have you read my monograph?"

"No," Jim lied.

"Well," the biologist said, "the outer protective pair of wings isn't chitinous; merely thickened. It aids in flight. And it has a third function, too—when the insect wants to fly silently, it can inter-phase the two pairs of wings so that the sound waves nearly cancel out. Marvelous creatures." Pell walked to the sink and drank another beaker of water. "It would be very tragic if those two poor boys died because of something as harmless as this. If people would only read what's available . . . I'll give you a copy of my monograph, if you can't find it in the library."

"I'll try there first," Jim said. "Why are these things always flying around at night?"

Pell said cheerily, "Why, they're hunting. They catch smaller insects on the wing, by sound or by infrared. Carrion forms a small part of their diet, but mostly they eat other insects."

"Oh," Jim said, "I guess there isn't much in my idea, then."

Pell frowned in thought. "I wouldn't say it's impossible. There certainly must be some reason why they didn't simply wait in the hopter for rescue."

"Yes," Jim said. "Well, I won't take any more of your time. Thanks again."

As he walked away he reflected that he'd learned one thing from the interview: Rinette hadn't come to Pell to talk about the cols. He glanced at his watch. The library was open by now. He wanted to read whatever'd been written about the carnivores called "thylacines," and he'd also take the opportunity to sneak Rinette's copy of the Pseudocol monograph back on the shelf. He was almost convinced, now, that Rinette was dead because he'd been too interested in something—possibly, but not surely, the cols. Jim didn't want the same treatment.

" 'Thylacine'," a scientist of Phase One had written, "is a name chosen because of a superficial resemblance to the Terran marsupial. The Trancour quadruped, which is nearly twice the bulk of the Terran animal, is not a marsupial.

"The beast is usually a lone nocturnal hunter, but on occasion—for instance, when stalking a herd of grazing animals—as many as five or six may cooperate as do Terran lions. Grazing animals, while the staple of the diet, are not all of it. Immature or very old thylacines may live on small mammals, or insects, or even fish.

"The animal is seldom seen in daylight. Caves, or very dense thickets, provide dens, a number of individuals sometimes sharing one. In some cases burrows are dug in riverbanks, especially by bitches with pups. A mature male may have several sleeping-spots over his range of

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many miles, shifting about apparently at random.

"There are at least four definitely proved cases of thylacines attacking men, always at night and with fatal results. In one case, an automatic camera recorded the attack. A number of other attacks are presumed to have been by thylacines.

"On Day 417 of Phase One, a determined all-night hunt was staged along Elm Creek, resulting in the killing of several thylacines and the immediate disappearance from the valley of the others. Thylacines since seen in other areas have often fled at the first appearance of artificial light, as if recognizing its significance."

There was more, but nothing that helped Jim. He left the library to go through the motions of eating lunch. He tried to ignore the covert looks of his mess mates.

Back in his cramped office, he sat staring without plan at the check-off sheets for hopter Two Dash Nine. All right, he told himself, maybe he had put bum cells in, and maybe it just happened that the flashlight was missing, too, and he didn't notice it. In that case, he deserved what he was getting. On the other hand, maybe he wasn't guilty. The thing to do was throttle the feeling of guilt and try to think the thing through.

If the thing had been deliberate, it seemed a very uncertain way of committing murder. The actual weapon, if you thought about it as such, was some carnivore. To have worked, the plan almost needed the cooperation of the victims.

Or was that necessarily the plan? Suppose someone was following the hopter, or actually had a date to meet the two men in the valley? Now that he thought about it, how did he know the power had actually failed? Suppose Rinette and Bryant had landed at some other spot, met treachery, and been killed? It would be an easy thing to lower a cargo hopter over the opening directly above the creek and toss the bodies out where something would find them. And their hopter could be flown to the chosen place and a glide landing faked; *then* the cells could be replaced with the depleted ones. The two trails in the grass could be fakes, too.

Well, all that was conceivable; but who would do it? Plenty of people had the opportunity. There were outlying installations of various kinds, all needing more or less service, two field camps of a dozen men each, and several recreation areas where men stayed overnight. And at any given time there were dozens of hopters not in the pool. Werthen, Lockerby, Kroll, all had their assigned craft. The Duty Officer had one parked handy. Supply had two two-seaters, one modified to carry light cargo, and from one to four of the bigger craft, depending upon the needs of the moment.

Jim got up and stood, listening ab-

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stractedly to the sounds from the hangar. Someone was hammering on metal; probably taking the dent out of the dismounted wing section. He forgot that. Why had Rinette been interested in the cols? He—or Russ Bryant—apparently had been photographing them through a blue filter. His mind caught on that; it was wrong. What did a camera filter have to do with the animal's blue-blindness?

A thought struck him. He bent over the desk; pulled open a drawer and got the flashlight he kept there—one of the standard models. With excited fingers he fished in his pocket for the filter.

It fit snugly over the bulb-end of the flashlight.

His blood was pumping now. So it *had* been the cols Rinette was studying; with a light they couldn't see. Unless it were some other blue-blind insect. But there was the pamphlet. And he'd probably pulled the filter off the flashlight in a moment of stress, and dropped it on the floor of the cockpit—yes, that sounded right; in the desperate glide or after they landed, when they were going to climb out and check the power cells. And in a few minutes the flashlight went dead, too; and in the dark, somebody, or something . . .

Maybe a col *wasn't* harmless. He remembered Pell's offering to let him try the bite. Then he also remembered that col eggs, as well as anything else that could stand the trip, had been sent to Earth so the insects could be studied. And there must have been dozens of men bitten here.

Maybe it wasn't the col.

Maybe, too, the whole setup was a deliberate misdirection to cover something else. And—finally—the whole thing could have happened just as claimed. Except for the missing flashlight, and Rinette's pocket igniter found in the grass . . .

This was going in circles. Unable to stand the office any longer, he took the filter off the flashlight and slipped it back in his pocket, then went out into the hangar to watch the work, unseeingly. The dent was out of the wing now and Ernie Reik was spraying lacquer on the spot, the familiar smell of the solvents filling the hangar. If Jacques and his partner had actually gotten out of their hopter with the flashlight to check the cells, and it went dead on them . . .

Suddenly Jim had a mental picture of the volatile Jacques shouting profanity, then setting himself and hurling the flashlight as far as he could.

No one had looked in the grass more than a few yards from the hopter.

He darted a glance at his watch; fairly ran back to his office and switched on the intercom. "Duty Officer!"

He had to argue with Ken Mapes, but finally he got through. "Duty Officer; Kroll."

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"Oh, Lieutenant," Jim said. "Say, can you tell me who serviced Elm Creek yesterday afternoon and last night?"

A pause. "We had two other teams double up duty, Jim. Why?"

"Well, I'd like to take the run this afternoon and tonight."

Kroll hesitated. "I guess that'll be all right. I'll have to find you a partner."

Jim said hurriedly, "That can wait, can't it? I don't need one for the day trip."

Kroll made a doubtful sound. "I suppose you have a right to be eager. Are you ready to leave soon?"

"Right now." Jim switched off and hurried from the office. Over his shoulder he called, "Ernie, I'll be away till sundown," then he strode to hopter Two Dash Nine.

The afternoon sun was in his eyes as he rounded the high peak and began his letdown into Elm Creek Valley. On impulse, he turned off power and nosed down to keep gliding speed, and took the same notch Rinette must have taken. It wasn't too bad, in the daytime; he could see the turns coming. It must have been hectic by starlight, without even Trancour's single moon in the sky. He flashed out over the valley, made a careful turn, switched on vertical gravs, and let the hopter coast northward.

Before he was even over the spot, he could see the tracks in the grass around the furrow, where a number of men had searched. They hadn't even had to complete the circle—they'd evidently guessed pretty well which way Rinette would have thrown the flashlight. Toward Base.

So they'd thought of it, too. And now he remembered discussing the flashlight with Ernie Reik, on this very spot.

So Reik, maybe, was one of them. He'd be in a good spot to commit the sabotage. Jim, shaking with anger and disappointment, put the hopter in a shallow bank and let her circle on her momentum. Reik hadn't left the Base since. Who? Lockerby, possibly; he'd voted against letting Jim sniff around. Or had he? That was a presumption. Pell? Rinette apparently hadn't trusted him; but it was hard to imagine the biologist, on his bad legs, clumping around out here. There'd been several.

Now Jim understood why they wanted him off-planet in a hurry. But why had they let him look, then? Just for the appearance of it? And if they let him get to Earth—

It occurred to him that maybe they didn't intend to. One small mishap with the cargo drone, and he wouldn't.

His spirits sagged. There must be a whole cartel of them. What chance did he have?

Then he told himself all this was speculation. How did he know the search for the flashlight hadn't been open and legitimate? If so, he'd find

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out when he got back to Base. Even before—if he lifted high enough to radio, Ken Mapes would have all the scroop.

But in that case—if it *weren't* legitimate—Jim would have revealed that he'd flown here, and knew about it.

The hopter was barely moving now. He applied forward drive, reefed around, and headed for Site Eighteen. He'd have to act as if nothing were wrong. There was tonight. And if he learned anything then—he was sure he'd learn nothing in the daytime—he'd get back to Base, tell his suspicions and whatever he knew to anyone and everyone who'd listen, in crowds, in the mess hall. The whole Base couldn't be in on it. There was too much secrecy, too much caution and subtlety in the thing, for that.

Site Eighteen consisted of several cage-traps of different sizes, a spectrum of automatic recording instruments, batteries of lights, and a monitor station for checking, via telltale panel lights, the condition of the various things. A few Sites that had direct-line radio contact with Base were automatically controlled from Base; even having closed TV circuits so the traps could be watched. The Sites along Elm Creek needed personal attention; one of the main reasons being that unwanted animals were always getting into the traps, which had to be reset. Obs, in particular, were a nuisance; they weren't wanted because they were everywhere and had already been studied. There'd even been a few around the Base as pets, from time to time.

Jim landed just upstream of the fork where a small tributary joined Elm Creek, climbed from the hopter, and walked to the monitor station set in open grass fifty yards from the nearest trees. He unlatched a panel-door and swung it open. On the telltale board, four lights were red; the rest were either green—equipment turned on and ready, or traps set—or unlighted—equipment turned off and not in use. Of the four, three represented cameras that needed attention—out of film, or obstructed by foliage—while the fourth indicated something in Trap Six. He opened a smaller door, punched studs, and got a closed-circuit view of that trap. Only an ob. He secured the station and walked toward the trees, unbuttoning the pocket that held his needle-pistol, though he didn't expect any trouble in daylight. He'd let the ob out before servicing the cameras.

"Ob" stood for "Otterbear," a faintly descriptive name someone had applied. It wasn't much bigger than a Terran otter, but looked bulkier because of its loose baggy skin. Its head was like a small bear's, with deep-folded eyes and with dewlaps beneath its chin that gave it a comical old-man look. This one had pulled the bait loose—a chunk of

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raw meat—and eaten most of it before worrying about escape. Now it was trotting from corner to corner of the huge cage, which was designed for much bigger game, sniffing and pawing at the wire mesh. The instant it saw Jim it cowered in one corner, almost lost in its own skin, peering at him in fright. It made a small whimpering sound.

"Relax," Jim grinned, "I don't want you." He stepped to the upright post that held the hand controls; pressed a stud. The gates at one end of the trap slid apart. The ob darted a look toward the sound, whirled, and was out in a blur of motion. It scurried toward the reeds lining the creek, stopped once to peer back, then nosed its way in and was out of sight. A minute later Jim heard it slide into the water.

He got a chunk of fresh bait from the freezer compartment beneath the trap, crawled into the trap, and rebaited it; then set the controls and stood looking at the trap pensively for a minute. During Phase One, he'd heard, a man had taken refuge in a similar trap when the lights shorted out, and had to wait through the long Trancour night with predators nosing about until rescue came in the morning. That would be a good trick if one wanted to spend some time studying things in the dark. Conceivably, Rinette had been doing that, with the blue flashlight ready in case he heard something that interested him. But there was no indication.

There was nothing, either, anywhere else in the Site. He took care of the cameras, spent another quarter-hour prowling around, then went back to the monitor station to make sure there were no more red lights. There weren't.

He felt let down as he took off and headed downstream to the next Site. He shouldn't; he'd hardly expected to learn anything in the daytime. He hated having to go back to Base and wait for midnight. He'd have to do it, though, or they'd come looking.

He serviced the other Sites, having to release two more obs and one larger, somewhat hyenalike creature that snarled at him but didn't attack. He got into the hopter and let it climb sharply to clear the mountains. It was late afternoon now, and once he dropped beyond the summit he was in shadow. By the time he was near enough to Base to see it, the buildings were ruddy dots illuminated by the sun's last rays, set against the gray cliff. He'd seen it like that many times. How many more, he wondered.

Ernie Reik was standing in the door of the hangar as Jim landed. Jim climbed from the hopter, trying to keep his face calm. He didn't really *know* that Reik was an enemy.

Reik came forward. "I thought you might want to hear before they hit you with it officially," he said a little hesitantly. "They're going to have the cargo drone ready tomor-

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row, and you're restricted to Base tonight."

Jim's reaction was odd. He felt only a brief, mild surge of anger that left only a dull resentment. He stepped off the wing. "I suppose Lockerby pushed the work," he said coolly.

"Right," Ernie said with a grimace, "but the restriction's Werthen's orders."

"Oh," Jim said, "so I'm getting attention from the top? Did Werthen ask you to break the news?"

Ernie blinked and looked surprised. "Of course not; it'll be a published directive. I heard about it ahead of time from Kroll, because I'd volunteered to be your teammate for tonight and he had to call that off."

Jim found himself grinning sourly. "He did, huh? And you were all set to go to Elm Creek with me tonight? That would have been cozy, wouldn't it?"

Reik slowly turned red. Then he turned and walked away.

At least, Jim thought, they knew now he was on to them. Maybe that was a mistake on his part. Maybe Rinette had made the same kind of mistake. He'd have to watch himself; act as if he were resigned to being put in that drone tomorrow. And if he accepted the restriction to Base, maybe they wouldn't put a guard on him. He'd have to wait another two hours anyway, for full dark and for the activity at the hangar to subside.

He walked in to the ready-room. "Will you take care of Two Dash Nine?"

The men looked at him with varying expressions. The corporal in charge of the night crew said, "I thought Ernie Reik was doing it." He got to his feet. "Sorry."

"Reik went to chow," Jim said. "That's where I'm going, too." He turned and left, aware that they all watched him go.

He ate, slowly, to kill time and so he wouldn't get a nervous stomach. Before he was finished, Lieutenant Kroll appeared in the doorway, looked around, spotted him, and came over to sit down opposite him. He kept his voice low. "I'm afraid you can't make that run tonight, Jim. You're restricted to Base."

Maybe, Jim thought, watching Kroll's embarrassed face, the lieutenant wasn't one of them. Who could tell? He said woodenly, "What difference would my making that run make? Does somebody think I'll miss the drone?"

Kroll glanced away. "Colonel doesn't want anything to happen to you."

"I'll bet," Jim said. "All right, Lieutenant. I'll go to bed early and be rested for the trip. Thanks."

Kroll mumbled something and left. Jim finished his meal deliberately, ignoring the eyes on him, then headed for his barracks.

There were a few men loafing on their bunks. He ignored them, laid his things out on his own bunk, and

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began getting them ready to pack. It was hard to hide his inner tension. Another hour, maybe less; it depended on when the last afternoon flights got in. Finally he could wait no longer. He left his stuff where it was, walked out, and headed for the pool.

The floodlights were still on, though, counting, he could see that all the hopters due in were there. Two armed PFCs stood in the door of the hangar. He wasn't much surprised. Well, he didn't think every hopter on the Base could be under guard. He walked past the embarrassed Privates and to his small office. There were some personal things in his desk, which he stowed in a small box he got from the hangar. Carrying the box, he walked out past the guards. "Have a nice night," he said.

His mind was busy as he walked back to the barracks. Which hopter would be the easiest to steal? One of the officers', probably—their huts were near the cliff, and likely to be dark this early, since the officers spent their evenings mostly at the Club.

He deposited the box on his bunk, then opened his locker and got some script, so anyone watching would suppose he was going to PX. He walked out casually and headed that way. Once in shadow, though, he turned behind a dark building and got himself out of sight. He took a way through the Supply area, because the close-set buildings there offered cover, then, after pausing to reconnoiter, entered the Officers' area.

He went first, out of spite, perhaps, to Lockerby's hut. The major's hopter was gone. Well, under the circumstances he might as well steal from a colonel as a major. He trotted the few yards to Werthen's hut, found a hopter there, crouched listening for a minute, then carefully slid back the canopy and eased himself in. When he switched on the converters, their faint hum seemed louder than ever before. He lifted to about thirty feet, moved close to the cliff, and slipped along it until he was away from any buildings. Then he rose vertically and got over the rim. Once he was beyond that and low to the ground, he was hidden from the Base radar even if it were operating.

He turned west, staying as low as he dared without lights. He put on speed until the air buffeted the canopy. How much time did he have? A half hour or more, probably, until anyone missed him; then they might search the Base for a few minutes. Say, an hour's lead. He wasn't going to Site Eighteen or anywhere else Rinette had been servicing. If cols, or some other insect, were the thing, they'd be other places, too. Maybe he ought to stick to Elm Creek, though—Rinette had chosen it, for some reason.

He had to slow down when he reached the mountains, for if he were to lift very high radar would

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pick him out. Near the summit he hovered a few minutes, listening to the radio. Base was talking to one of the out-camps; casually, about supplies. Surely they'd missed him by now! Maybe they just weren't publishing the fact.

He picked a way among unfamiliar peaks, reached the valley, and dove for Elm Creek about thirty miles above Site Eighteen.

What he needed, he thought, was a place to slip in among the trees, for cover; but to find one he'd have to turn on lights. He risked one spotlight, flying low up the west side of the creek so it couldn't be seen from the opposite side. Finally he found a place that looked right. He circled, forced himself to take the time to line up properly, then eased in very slowly. One wingtip scraped across a trunk, making the craft shiver, but he got in. He had to drop suddenly from a foot up to check forward drift and avoid bumping another tree. But he was in, and covered from above, and not too easy to pick out from the side either.

He left the spotlight on a minute more, swinging it to familiarize himself with his surroundings. He was only yards from the screen of reeds, which, at one place, was thin enough so he could see the dark smooth water beyond. He turned the light off and sat for a moment in the dark.

He could simply shine the blue flashlight through the windshield, but he'd rather have it up some where and to the side and in front of the hopter, for a better angle. He turned on the smallest spotlight the hopter had and aimed it around. There was a tree about in the right place, but he'd have to shinny up it.

After a moment's hesitation, he slid the canopy back and climbed out, carrying the flashlight, and hurried to the tree. He was sweating and gasping for breath by the time he made it up, and he hung over the first limb for a minute, resting. Then he found a place to lodge the flashlight in a crotch, slid down, and got back to the hopter. With the spotlight on, he'd probably been safe, but it was good to be back in the closed canopy.

The blue light was disappointingly dim, but after a while his eyes adjusted better. He sat, shifting in his seat with impatience. It felt hot in the canopy; he endured it because he didn't want to turn on power for the air-conditioner. That would make a little noise. He looked at his watch. Over an hour and a half since he'd left Base. Another fifteen minutes dragged by, and he began to feel like an idiot. What did he expect to see, sitting here like this? And what would he do if he did learn anything?

About all he could do was make it back to Base and tell everyone he could find the whole story. It occurred to him now that he should have brought a camera. Did he dare

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fly to one of the Sites and get one? Not now; he should have done that first. He unzipped his jumper and let it hang open. If he could only let a little of the night air in, it would be cool; but even sliding the canopy open an inch would make some noise. This part of the creek seemed deserted; or maybe the blue light was scaring everything away. He told himself it was too soon to give up. It wasn't, after all, a half hour yet since he'd landed; things were bound to be cautious. Another ten minutes went by.

Something stirred where the reeds were thickest.

An ob's head thrust carefully into the open, tiny eyes peering up at the light. It withdrew. A minute later it appeared again, swiveled from side to side, and emerged, followed by the otterlike body. The ob padded about, sniffing here and there, stopped, peered toward the hopter, retreated uncertainly to crouch for a while in the shadow of a tree trunk, then started on its tour again. Presently it vanished.

Two hours since Jim had left Base.

Now other creatures began to stir. A mouselike thing came from somewhere, darted with amazing speed through the circle of illumination, and vanished. Where the reeds were thin, Jim saw another ob climb from the water, shake itself, and trot down the muddy bank. A col flew suddenly through the light, checked, flew once around the hopter, and was gone. Jim shifted nervously in his seat.

When the significant event took place, it was at the edge of illumination so that he had to strain his eyes. An animal like a squirrel but with a shorter tail and much bigger ears let itself slowly down a tree trunk and crouched for a minute, peering around it as if it were bewildered. Then it started toward the creek, hurrying and staggering a little.

Even through the canopy Jim heard a col buzz, and saw the insect hovering above the creature. But it didn't descend.

Before the small quadruped reached the reeds, an ob came from downcreek, its long body undulating in a lope, and put itself in front of the smaller thing. The latter stopped, without apparent fear, but simply because the way was blocked. The ob casually stepped forward, turned it on its side, and held it down with forepaws. Then, unhurriedly, the ob sank fangs in the small thing's throat.

During the whole time the tree dweller didn't struggle or try to escape.

The ob feasted leisurely for a minute or two, then the col—hovering over the two of them—buzzed again. The ob stopped eating and raised its head. Straining his eyes, Jim saw the col land on the ob's throat and squeeze itself out of sight in the dewlap.

Jim's blood was pounding in his

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ears now. A symbiosis! The insect—harmless, did Doc Pell claim?—stung—or bit—a victim into a stupor, then called the ob. The ob provided a nest, and God knew what else, for the col. Too excited to think, he reached for the controls. He had to get somewhere and get a camera and photograph this process. One set of movies would break the thing open and bring on a rebellion against the officers involved. He caught himself. He daren't leave the blue-filtered flashlight here.

He sat for a moment, shrinking from the task of climbing out of the hopter again, then turned a spotlight on. The ob stopped feasting and darted for the creek. Hastily, Jim threw the canopy back and got out; ran for the tree and shinnied up it with desperate strength. His exhausted fingers dropped the flashlight. He slid down and retrieved it; started for the hopter.

A needlebullet slammed through the canopy before he reached it. He whirled toward the source, grabbing for his own pistol.

A voice from behind him—Lockerby's—said coldly, "Hold it, Gruder. There are four of us around you."

Slowly, Jim straightened. Rage and frustration made him tremble. Wasn't it just as good to die now, fighting, as to be put in that drone? Or would they even let him get that close to Base, now?

Another hidden voice—he thought it belonged to Narva, the Storekeeper—said, "Believe him, Gruder."

Slowly, sick with despair, Jim let his hand drop. He couldn't shoot at them without seeing them. The only chance—slim as it was—was to pretend he thought they'd really send him to Earth; let them take him back to Base, if they would.

He could hear them moving about. Lockerby said—from a different angle, Jim thought— "Get the pistol out and drop it, Gruder, then move away from it." Slowly, Jim reached for his pocket. He held the gun for an instant, tempted to shoot blindly. But that wouldn't even inconvenience them. They'd kill him, and claim they'd had to. He'd placed himself in that spot. The pistol thudded on the moist ground. Jim stepped a few paces away.

Now Lockerby came into the light, recognizable by his build and insignia, but his head obscured by a hood like a beekeeper's veil. Of course, Jim thought dully—protection against the cols was as simple as that. Gloves, a veil; trouser-legs tucked into boots. Lockerby said, "You gave it a good try, but you weren't lucky. We were already over the creek to look for any evidence Rinette might have left, and we saw you when you first turned on your lights. Why didn't you go somewhere else?"

Jim stood sullenly without answering. He heard two of them approach from behind, then his arms

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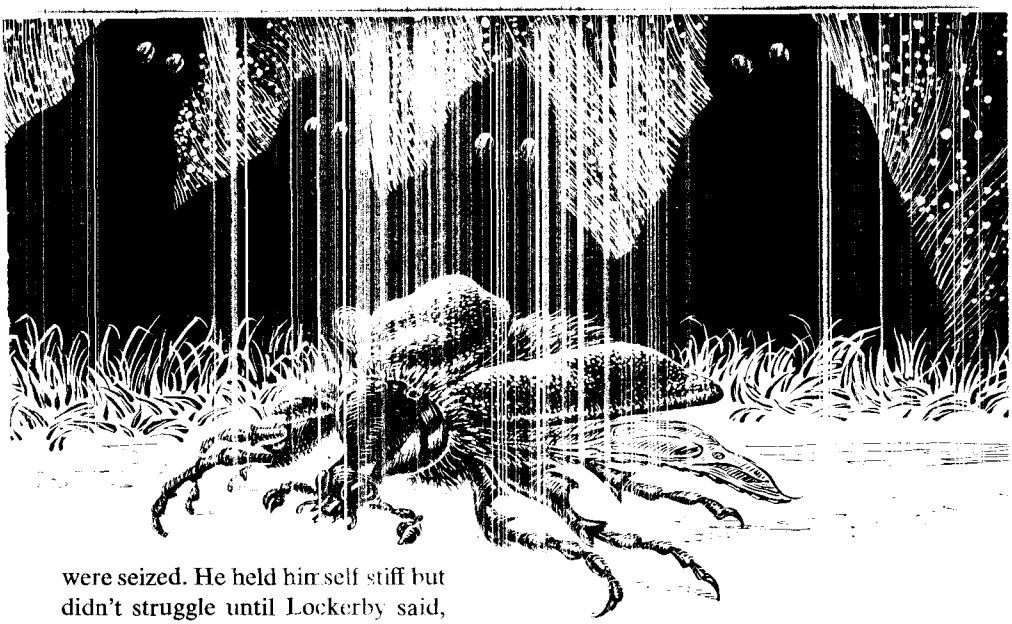

were seized. He held himself stiff but didn't struggle until Lockerby said, "Not too hard," and by then it was too late. He thought it was the flashlight they hit him with.

He came to shivering with cold, his head throbbing almost audibly. He rolled over, got his hands under him, and pushed up to all fours; stayed there a minute until the dizziness subsided a little, then climbed to his feet. He stood unsteadily while memory came back. He looked around him and recognized an area of Site Eighteen, though there was only starlight. He puzzled over that. Why had they left him here? Weren't they going to take him to Base? If not, it was strange that they'd leave him at a Site, where he could turn on lights; even activate a recorder and talk.

But maybe they'd cut the power entirely.

He started toward the monitor station, then grunted and slapped at his neck as something bit him there. Fear began to quicken his dulled senses. He broke into a ragged trot; stopped and crouched as a col buzzed somewhere a few feet above him; zipped up his jumper; started on. The col stayed above him, buzzing now and then. He got perhaps twenty steps, then halted. What was the rush?

Some buried part of his mind shouted an urgent message, but he couldn't understand it. This was a pleasant, comfortable spot, now that he'd got over his chill; and there was no danger here. Danger? What was that? Childish dreams. A recollection of two men named Rinette and Bryant ghosted through his mind, but he pushed it aside. Something unpleasant and ugly had happened to them, and he didn't want to think about such things. He

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glanced up, trying to see the col; but there wasn't enough light. He wondered if its buzzing meant it was trying to talk to him.

His head had stopped hurting now, and he felt much better all over. In fact, he felt wonderful; but he was thirsty. It was lucky he was near the creek; all that cool, friendly water. He started that way. The col buzzed again, more urgently.

"Just going for a drink," he told it, wishing it would come down and light on his shoulder.

It seemed to take him a very long time to find the creek; his feet kept blundering in the wrong direction. He stood a moment, peering at an odd structure in his path. Oh; that was one of the traps. The buried, foolish part of his mind screamed at him to crawl into it and tug at the bait. Wasn't that ridiculous? He'd be locked in, then, unable to get to the water; he was very thirsty now.

He remembered that someone else had been very thirsty, not long ago—oh, yes; Doc Pell. He peered around him, saw the glint of water and stumbled toward it. Ah! He pushed aside the thin screen of reeds and let himself fall to the mud. It felt cool and wonderful. He squirmed forward and drank, deeply; lay for a minute sighing with contentment, then drank again. When the thirst was taken care of for the moment he turned on his back and stared up at the stars. The friendly col was above him, buzzing.

Something was moving near him. He turned his head and saw an ob peering from the reeds. "Come on," he crooned, "I won't hurt you." The friendly little creature advanced until it stood close to his head. He thought, *Why, it wants to drink a little of my blood. Wasn't that sweet?* "Come on," he said again, slurrily.

The col was lower now, buzzing only gently. He knew the col loved the ob, too; somewhere, he'd seen how one nested in an ob's dewlap. The ob put its forepaws on his chest. He wanted to lift a hand and pet it, but his muscles seemed very sluggish. But he felt wonderful; wonderful. He didn't feel the prick of the small fangs at his throat; only the slight pressure. He lay still so he wouldn't frighten the creature.

He was very drowsy when harsh lights suddenly flooded the area. "No!" he cried out weakly, "Go away! You'll scare my friends!"

They called Colonel Werthen the minute Jim revived, in the infirmary. The big sunburned man stood looking down at him for a while. "How do you feel?" he asked finally.

Jim moistened his lips. "All right. Weak, that's all." He lay a moment, remembering. "How much blood did I lose?"

"Almost too much."

Jim thought some more. "I guess I owe you an apology."

"No," Werthen said, "I owe *you* one."

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Jim tried a shrug. "I guess it's even. What brought you?"

"Ernie Reik did. It was lucky you were sarcastic with him; it set him thinking along the right lines. When he came to me, we were able to put two and two together."

"Oh," Jim said. "I'll have to apologize to him, too. I thought he was one of them."

"No, but he's the only holdover from Phase One who isn't. All the rest are addicts. Doc Pell got the habit first; he'd discovered the euphoric effects of the bite, tried it secretly on himself, then used it regularly when he was suffering from the burns. His legs have been well for a long time, by the way. What we saw occasionally—at the hearing, for instance—were only withdrawal symptoms. He didn't dare get hopped up before the hearing."

After a while Jim said, "I see. And they formed a sort of group, to cover up their addiction. I can see how it would be hard to give up, at that."

"They're all giving it up now," Werthen said grimly, "and they're not enjoying it. I wonder if you figured out how they killed Rinette and Bryant? They told me."

Jim said, "I only knew the cols were involved some way."

Werthen nodded. "They put several of them, with fresh poison, under the seat cushions. When the cockpit lights went out, the cols went to work. Oh—maybe you don't know about the venom. The cols don't, and can't, make it; that's why Pell was able to cover up. They get it from obs. Some partnership, eh?"

Jim nodded, then lay thinking. He must have dozed partly off, for he barely heard the colonel say, "Well, I'll talk to you again when you're stronger." He was grateful when the colonel had gone, and he didn't have to try to stay awake. ■

In Times to Come *continued from page 79*

New York, 1967, can walk into the doorway of Hitler's Reichstag before it was burned!

We are also, of course, having more conventional unapplied science fiction—particularly Guy McCord's yarn about the social customs of a bunch of colonists on the planet Caledonia.

They hadn't intended to colonize there—their ship was wrecked there, and that's where they had to stay. And they didn't plan on a peculiar culture—it was just that only a very few books survived, and their major Holy Books happened to be the Works of Sir Walter Scott, and an anthropological text on American Indian customs.

It was a fairly rugged world—and the survivors of that strange mishmash were most decidedly rugged!—THE EDITOR

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FREE VACATION

If you can't afford the price of an interstellar trip—there may be ways to get the State to provide free passage to a brand new, adventurous world, even if they don't approve of you . . .

W. MACFARLANE
Illustrated by Leo Summers

"There is no justice!" screamed a woman.

"You are quite right," said the Administrator. "All we have is law. We are gathered here for this departure ceremony when all of us would rather be elsewhere. You have had your day of judgment, and you now have the choice of psychological treatment, or participation in the new-worlds program. In either case you will get some detachment, a little distance on the

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reasons you are here. You have noticed the two doors? One leads to the Rehabilitation Clinic and the other to Space Services. You will please make your choice. By your actions, you have forfeited any options. You have no room for maneuver. It is one or the other. Any undecided person will opt for Rehabilitation."

Day Layard was at the rear of the crowd and he rubbed his head in exasperation. A consensus society demands talk, talk, talk. The best thing about being a criminal was that he no longer had a public communicator, and no longer was his opinion required on a thousand questions about which he knew nothing. Interminable questions were the curse of education, and especially now that he had begun to suspect how little he knew. Was the highwater mark of human achievement the sheer volume of voices gabbling into a master computer?

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A man said, "What to do, what to do, oh what to do!"

The woman beside him said, "Go let the psychologists bugger around in your brain, you crazy fool," and she wedged her way toward the door marked Space Services.

"Dirty rotten," said another woman under her breath. "Dirty rotten." She peered under her eyebrows and scuttled through the crowd to the Rehabilitation door.

"A little distance," quoted a fat man beside Layard. "Hoak-hoak-hoeek! Twenty light-years, a little distance, well-well."

"You know where we're going?" asked Layard.

"We are going to take a walk over an unknown planet," said the fat man. "An outing tour in exotic surroundings with all expenses paid. Hee-hee-heek." He seemed genuinely amused. His eyes crinkled and his shoulders shook when he chuckled.

"But twenty light-years—"

"Or two hundred twenty. Who cares? It's going to take you four weeks subjective time." He was the fattest man Layard had ever seen, not tall and not flabby, but with an immense waistline. "For the trip they put you in stasis. You could be back here in three elapsed months, or two years. For any one point destination in Gonzalan space, the longest recorded trip is two hundred eighty-four days. Where have you been, boy? You must be a Boondocker."

"What are the chances of getting back?"

"It's been running nine point four the last five years. But there was a planet sixteen years ago where only one man made it. The explorers took a fair good look, but there was a seasonal hatch of a dessicated bug whose first requirement for survival was liquid, and it wasn't particular what. About as big as a sparrow and teeth enough for a tiger. Nasty round sucking mouth. Blood killed the bug, but that wasn't much consolation to a drained corpse. Ho-ho," he sighed, "sixteen years ago."

"How come you know so much about it?" The crowd was thinning away from the Space Services door toward the security of the other.

The fat man did not smile. "I spent two weeks in a river."

Layard was so interested that he did not notice when they passed through Space Services to a long narrow room walled with doors. Men and women were standing in front of each door. Down the center of the room was a table with boxes on it.

The Administrator was standing halfway along the room waiting for the last stragglers. "Close up and leave no blanks. Choose a box and write your name on it. Put your number in the indicated space. When you have done this, take off your clothing and put it into the box. Step into the cubicle, take a deep breath and close the door be-

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hind you. You will be totally surrounded by tempragel and the cubicle will be placed in stasis."

Because the fat man did so, Layard wrote his name on a box, but he could not bring himself to undress. His vision was blurred. There were pink bodies all around him. He had been raised in a restricted little community of 400,000 near the south pole. Their ways were different from the temperate zoners.

"Strip, Boondocker!" said the fat man, and this time the word was an insult that shook him. "They'd love to get a kid like you in Psych. They'd unwarp you fast enough. A skin complex! Shuck off those clothes and hide behind the door!"

Layard had been deeply afraid, but he threw his clothes into the box, wheeled to the cubicle, took a deep breath and pulled the door to him. Immediately the floor arose, the roof came down and he was intimately engulfed from all sides by a cool plastic material. He could not move against it . . .

. . . Until he let out his breath and stepped from the cubicle into a gray corridor he had never seen before, changed in a subjective instant from the long narrow room. He found himself in a line of bodies walking toward a fluctuating orifice.

"Stand on both feet and don't move," said a voice ahead. "You'll get your clothes when you go through the door. All right, next. Stand on both feet and don't move—"

"The good old universal automatic tailor," said the fat man behind him. "Heek-keek-keek—it stuttered the last time I went through."

Layard looked back and rubbed his head. The vast stomach quivered. The fat man winked at him so cheerfully that Layard risked a look at himself. He was deep red from his chest to his toes.

"Stand on both feet," said a woman by the orifice. "Well, I've seen everything now . . . no, I haven't. The reddest kid and the fattest man—that's the lot."

Finally dressed in a mottled green all-weather suit, Day Layard felt his temperature drop to normal. The crowd was small, out in the open beside the ship. There were mountains around them and the air he breathed was light and sparkling, with an unknown bittersweet fragrance.

"You each have a pack," said the woman who herded them out of the ship. "The gun is a gun and the beads are loaded for the creatures of this planet. If you shoot each other, nothing is going to happen. Range is thirty meters dead-level accuracy. You have one thousand beads in clips of fifty. The heaviest item you will be carrying is a six kilo analog mill. Stuff the opening with meat, or grass, or fruit, or anything organic, and it will reduce the material to a paste containing analog proteins, fats, sugars and starches. While the mill is not delicate, if

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you break the case the energy is likely to be released at once. Each one of you has an air photo and a directional needle tuned to your pickup hut. All huts are equidistant in ease of march from this point, though some are farther in kilometers than others. It should take about fourteen days to reach them. The ship will make pickup thirty local days from now at the huts."

There was a babble of questions, but she turned and went up the ramp and it pulled in behind her. The cube ship honked twice and went null. A great square box, it drifted up and sideways, gravitated and was gone.

Layard was overcome with a feeling of desolation. The group of men and women seemed even smaller now that the ship had departed. The wind was louder.

The fat man took the gun out of his pack and shot at a nearby boulder. He put the gun into the clip on the side of his suit and sat on the rock. "Spit before you sit," he said obscurely. "Now look here, Boondocker, my map has a red circle for where we are now, and I'm keyed to a hut by a lake that looks like a fingernail. Yours the same? Well, let's team together. If this turns out to be a tough planet, two get a lot more sleep than one."

Layard rubbed his head with both hands. "Why did you shoot the rock?"

"There's a planet with a silicon life form that sticks tendrils right through your suit. Pretty soon you're sitting on a bunch of writhing needles and out you get. Nakedest two weeks I ever spent. You look through your pack and I'll go check on the huts."

Layard had some doubts about teaming up with the fat man until he was left alone, and was suddenly homesick for the bland familiar world whose dangers he could comprehend. This place was alien and he had never thought of a rock being alive. He stood up quickly and brushed the seat of his coveralls. This embarrassed him, so he sat down gingerly and examined the contents of his pack. He slipped a string of beads into his gun and clipped it to his side. The analog mill was held in its special pouch and there were flavoring pellets in tubes around it: beef, ougel, chicken, tomato, govond, cheese and fruit. There was an air adsorption canteen with flavor buttons. There was a fire tube, soap, a towel, a mirror, a shaving pad, a pack of toilet plastic that fuzzed up when you waved a sheet in the air, a knife in a sheath and the direction needle with a wrist strap. He spread his map on the rock and oriented it with the help of the needle. The route to the hut lay directly over the range of mountains on the horizon. They would have to walk to the right, where the crest broke to a pass, before it ranged up again and went out of sight.

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"Hoods and mittens!" yelled the fat man. The men and women had broken into discouraged little groups about the meadow, and some were already cutting vegetation for their food mills. Layard pulled the hood over his head and struggled with the mittens until he found the release under his wrists. Then he walked down to see what the trouble was. The fat man was standing beside the stream that looped through the meadow. The stream bed was paved with rocks, and bubbles were oozing between the rocks, rising through the clear water, breaking the surface and lifting into the air.

"Just bubbles. Some men are plain cowards."

"What a horrid world."

"They fly against the wind."

The fat man shot one just breaking the surface and it burned in a puff of blue flame. The almost transparent skin rose in the heat and consumed itself in the air. "Probably nothing to bother us," said the fat man, "but they have acid fliers on Nigel that raise a two-week welt. People who settled there wear basic insufflators—no problem."

"I don't like it here," wailed a woman. "I want to go home. My hair's a mess and there's no bathroom! I won't breed bees again, honest!"

"We're deprived of our natural rights," said a man firmly. "No basic food, money, housing, or entertainment. This is rampant totalitarianism!"

"Why should we walk in peril of our lives? Let the explorers do it. That's what they get paid for. Let's have a meeting right now and register our protest. That'll show them they can't push us around. We'll stay here!"

Layard wanted to watch the bubbles and listen to the people, but the fat man touched his arm and they walked across the level and up the slope. "Let us be on our way, Boondocker. I've heard this before. There's not enough vegetation in five kilometers to support this sorry crowd, and when they find it out, do you think half of them will move away from their huts for solidarity's sake? They told me what I want to know. There are twenty huts in this drop, and that figures out to six people per hut. I've got them marked on the map."

He took the lead over a ridge and sidehill down to the bottom of a valley and up again. He walked quickly, almost daintily, through the wild countryside, avoiding the rocks and sparse brush, always seeking the easiest way. Layard assumed he could outpace the fat man, but they stopped only to assess the terrain and kept on walking.

Layard was very weary and very hungry, but his pride kept him from speaking. The fat man was tireless. His eyes darted ahead, up and down, and when Layard was certain they would walk forever, the fat man

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drew his pistol and fired. There was a squawk and a limp body dropped through the branches of a tree. "Get grass," said the fat man. "This stuff that looks like grass. Use your knife. Bring a bundle over there." He nodded to a rock outcrop on the far side of the ridge, and walked over to the creature flopping like a broken umbrella at the tree's base.

Layard sawed at the ground cover and found the stems so tough that after he had accumulated a few handfuls, he broke branches from a clump of bittersweet shrubs instead. The fat man was sitting on the rock, stuffing the creature he had shot into the grid of the analog mill. Layard joined him with an armload of vegetation. His mouth watered at the sight of the square strip of heavy paste the mill was extruding. The waste side was chuffing out great quantities of dust and the fat man looked disgusted. As best Layard could judge, less than a tenth of the body weight was edible, and the vegetation produced less than half that much.

The fat man cut the strips precisely in two pieces and they ate their meal. It was like all analog food; no matter what moisture you dialed, it tended to stick to the roof of your mouth. Layard tripped his canteen twice to lemon to help cut the bland beef flavor.

"What was she talking about, bees?" Layard asked, rubbing his head.

"They found a crazy bee on some planet that stings you with a hallucinatory alkaloid instead of formic acid. Well, dopies are not very smart, so this is really a first-class method of market research. If we stupids can live here for a month, then it's safe enough to set a couple of million colonists down. Why did they scoop you up, Boondocker?"

"Oh, I don't know. They said I was a primitive. I broke a couple of arms in a little argument. Aggressive tendencies, I've got, they said."

"Hoo-ha," sighed the fat man, "youth. It's been a long time since I broke an arm. It was mopery for years, and then I found out you could walk into the pokey easy enough, so I could forget the jackassery. It's the walking out that . . . Don't move!" His eyes had been busy and Layard was shocked to have missed seeing a creature coming toward them. It was the shape of a pancake and a meter in diameter. It moved by fluting its edges. It had two eyes in raised protuberances and the fat man put a pair of beads right between them. He nudged it with his toe, then rolled it into a tube and fed it into the analog mill.

"What is it?" asked Layard.

"Supper." The boy looked shocked. "Oh, sure, it's an interesting life form and I've never seen anything like it before. I think it's a constrictor and not big enough to bother men. But I'm only exobiologist enough to know when to run, or

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when to stuff the thing down the food mill. Here, you carry your half. Let's get going."

They went over the pass the second day and followed the ridges into a wide valley where they slept that night. Their all-weather suits kept them warm, or cool, as the weather required, and every step they took on the cushion soles added to the power-charge of the suit. There was a variety of animal life and a fifty-centimeter burrowing creature with beady eyes and a chitinous snout provided the highest percentage of edible food, so they chiefly shot this species. They saw some six-legged animals no larger than themselves at a distance, but these were wary and ran off before they ever got close to them. They crossed a range of rounded hills and walked over an undulating plain. On the evening of the sixth day, they arrived at the orange plastic hut. It was pleasant to sit on something softer than rocks, to take a shower, to reconstitute a variety of food and sleep on a soft pad again.

"This seems to be a safe enough place," said the fat man after breakfast the next morning, "but keep your eyes open. There were a bunch of beasts on Prabho who couldn't get enough of the color orange. Strong, stocky brutes, and squatty. They crowded the huts until they pushed them over. The herds got under my hut and shoved it like a pushball, and finally tumbled it into a river. I had to find another hut by pickup time. That was not so nice. I didn't know where the others were located, and the first two I found had been squashed by the beasts. Well, well. You have a nice time with the entertainment tapes. I'll be back in time for pickup."

"Wait a minute. I'll go with you."

"You won't be alone long. There'll be four more people coming in. I'm going to walk a long way."

"I'd rather come with you."

"Ha," said the fat man, "hoo-ha. All right. Tell me why, first."

"I know it sounds foolish when all we've been doing is walking, and we're sort of idiot guinea pigs to see if we survive in field conditions, but for some reason this seems to be worth doing. In school I was better than most, but not as good as the best at any one thing. Oh, I could keep up with the math sharks and for a while I ran tape for tape with a double E. But who cares? You're supposed to settle down and get interested in one thing. I was not properly motivated . . . oh, hell."

"Hoo-ha," said the fat man thoughtfully. "This takes a little puzzling. I had a partner once before, but he got himself killed, on a planet named Louper. They never settled that place. Well, get your pack and let us go. There's a likely looking spot on the edge of the map. There's a big bay on the coast and a line of white mountains marches down to it, ducks into the water, and shoves up a round white island

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in the middle of the bay. It's the most distinctive landmark we can hope to reach."

"Why do we want to go there?"

The fat man smiled sadly. "I got interested in one thing. I can't get anybody else interested, so I do it myself. It's no great mystery. I want to find the Prodromals. Let us walk."

When they stopped for lunch, Layard asked if Prodromals were creatures with faceted jewels in their foreheads, were they fur-bearing, or some peculiar kind of organic mineral, or did they have glorious tail feathers, or what?

The fat man did not laugh as he explained that Prodromals were those Running Before, the Antecedents, the Precursors of man in space. Sometimes you found artifacts and they were usually inexplicable, or dangerous. In a stable society, anything that cannot be explained is proscribed, and that meant the whole subject was ignored, consigned to inconsequentiality. In a consensus civilization there were no funds available or laurels to be won in a search for the unprofitable, so the Prodromals were left to the unstable fringe of society that deals with ESP, religion and foretelling the future by the shape of paint splotches.

On the third day they floated across a wide river in their suits and saw the white mountains looming on the horizon. On the evening of the fifth day, they reached the sea. It was an opaque blue and the shore was littered with flotsam. The fat man waited with avuncular patience while Layard went down the beach to put a hand in the water. The wind was cold and blustering. The sunset glow turned the white mountains to an ominous pink, and on the horizon, the island in the great bay was a small black patch, the only fixed thing in a world of tumbling water and scudding gray clouds.

"Ho-ha!" yelled the fat man. Layard followed the line of his outstretched arm and saw something in the ocean that appeared and disappeared in the crests and troughs. He ran up the beach and from the greater elevation he could see a dark object moving toward them across the wave pattern. "Let us get up higher," said the fat man. "You never know what's in an ocean until it bites."

The cliffs were low, rarely over ten meters high, worn and broken by the wave action. They climbed through tumbled boulders to a section of fractured cliff and turned to look again at the sea.

Layard scratched his head. "Why did we come here?" he asked, not in complaint, but in the universal query of what-am-I-doing-here standing between day and night, earth and sky, land and sea.

"Prominent terrain feature. Easily identifiable from space. I asked myself where I would put some-

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thing on a strange planet and the answer I got was, where I could find it again. We've got some paste left. Let us eat a little."

They lost sight of the moving spot in the fading light and Layard was about to suggest they sleep on the beach, when his eyes caught movement a hundred meters away against the creaming waves. He was drinking from the canteen, and choked. He could not see for a moment as water spewed from his mouth and dribbled from his nose. This was instant terror. What came out of the ocean and shook itself was a phosphorescent creature with six short legs built low to the sand, with a curling mouth as wide as its body. Over the noise of the wind and the waves they could hear it snuffling.

"Freeze," breathed the fat man. The sea creature ran with a lurching fluidity, a humping gallop down the beach where they had been. The fat man looked at the gun in his hand, drew it back as if to throw it away, and jammed it into the clip. "Poison beads," he snarled. "This is where we go to the rocks, fast."

They scrambled inland and it grew darker as they ran. They were masked from the immediate noise of the sea and across a boulder-strewn valley, when they heard the snuffling behind them during a brief shift in the wind. They scrabbled up a stony slope and found themselves at the foot of a rock face that loomed high above them.

"Fault here," said the fat man, and Layard clawed after him diagonally up the cliff. He rammed into the fat man and nearly fell when they were only twenty meters up. "Ledge," said the fat man. "We can go no farther. Light your fire tube and throw it down."

The snuffling was close now, and when Layard twisted the firestick to maximum and threw it over the edge, light sparkled from the teeth and eyes of the beast. It had swept up the rubble hill and stood on its four closecoupled rear legs below their ledge. Through a fluke, the fire tube stuck into the sand at the bottom of the slope and backlighted the beast nicely.

"Maybe six meters long, counting the tail," said the fat man. "I wondered why there were so few large surface animals, but I wonder no more." He was shooting as he spoke, and Layard shot as well.

They reloaded and fired another string while the monster below them ranged the cliff face looking for a way up. The fat man tore savagely at his pack. "Let us see if the lady knew what she was talking about," he said as the creature found the cleft. He threw the analog food mill at the beast. It stood erect and batted the mill beyond their sight. There was a brilliant flash and a sharp explosion. When their eyes recovered, the beast was no longer to be seen.

They rested then, on the ledge.

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The wind was beginning to spit rain. The fire tube still burned. "Hoo-ha," said Layard bravely, "I hope he doesn't have any friends."

"I don't know that he needs any," said the fat man. There was a noise of falling rocks off to their left, a snuffling, and directly above them against the loom of the night at the top of the cliff, was the grinning phosphorescent death head of the beast.

"T-take my food mill!" said Layard.

"And throw it up there? I'll tell you what. Over there at the edge of the light in the valley is a boulder—or something. I got a look at it when the mill blew up. See over there? The rock, that rock, the one with the pushed-down top. It's got a cleft, like a door, in the side. Too small for Stumpy up there and maybe too small for me. I don't think our friend is going to come down the cliff, but if he does, one man can dodge him on this ledge. Two can't. If you don't want to run, I will."

"Here's my pack," said Layard, and he scrambled down the fault.

There was a penetrating rumble of protest from the cliff top, an enraged coughing whine that sent him down the steep boulder-strewn slope in a windmill of arms and legs, balancing somehow to reach the valley floor. Over the near sounds of his laboring lungs and pumping legs he could hear rocks falling where the beast returned to the break in the cliff and was making its way down.

For a frantic moment he thought he had misidentified the rock, that the barely seen cleft was only a shadow. He slammed into a dark passage. There was the thump of a heavy body behind him, the rattling of claws, an intimate snuffling whine.

Momentum carried him staggering into an open space where he was seized by a vertigo that shook him. He was in the grip of personal, terrifying forces. He was expanded, warped, stretched, magnified, enlarged and changed, immediately and purposefully.

He looked around and saw he was standing in a circle of rock that came to his . . . knees. The valley and the cliff were reduced in scale. Swoopingly he dropped his front legs to the ground and his four hind feet climbed easily out of the rock. There was a snarling creature snapping at him on the valley floor, and with a scoop of his paw he caught it, raised on his hind legs and hurled it into the sea. He turned his attention to the fat little man on the face of the cliff just in time to catch the small black object between his paws, and set it gently to the ground. Then he settled comfortably on his four hind legs and ruffled the sleek fur on top of his head. The fat man nearly fell off of the cliff. "Hoak-keek-keek-oakahoo!"

Two great beasts ranged the countryside, disported in the ocean, swam to the island, returned to the

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shore and headed inland. In one busy night they picked up the huts and carried them to the plain, squealing contents and all.

Two men walked back from the great bay. "I think they did it for fun," said the fat man. "All the equipment for a proper vacation ready at hand, vision into the infrared, ultrasensitive nose, strength beyond belief, inbuilt empathic communication, travels with equal ease on land and sea. What more could you want? And all this from an automatic tailor powered by rain and spume. Trying to push anything else through the top is like pushing smoke through a tree. And nothing but a man can get through the door. How long has it been there? How old are the mountains? Or was it built last year?"

"I won't forget how it feels to be an environmental master."

"Any regrets at leaving it?"

"None. Let the specialists take over. You?"

"Hoo-ha," sighed the fat man. "It's a wise child who knows his parents, and I think we're the dull ones, the calm and stupid children—maybe the left-behind ones. I'll keep looking."

Two subjective months later, Day Layard stood at the rear of a large crowd. He was in no hurry. The ship would wait for him.

"Keek-ahoka-keek!"

"Hoo-ha, partner." ■

THE ANALYTICAL LABORATORY

June 1967

PLACE	STORY	AUTHOR	POINT SCORE
1	The Dukes of Desire	*Christopher Anvil*	1.81
2	Computer War (Pt. 1)	*Mack Reynolds*	1.87
3	Security Measure	*Joseph P. Martino*	3.38
4	Project Lion	*Lawrence A. Perkins*	3.75
5	The Double-Edged Rope	*Lloyd Biggle, Jr.*	4.11

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1	The Man From P.I.G.	*Harry Harrison*	2.02
2	Aim For The Heel	*John T. Phillifent*	2.51
3	Computer War (Conc.)	*Mack Reynolds*	2.97
4	Compound Interest	*Christopher Anvil*	4.14
5	Something Important	*E. G. von Wald*	4.55
6	Bite	*Lawrence A. Perkins*	4.75

THE EDITOR

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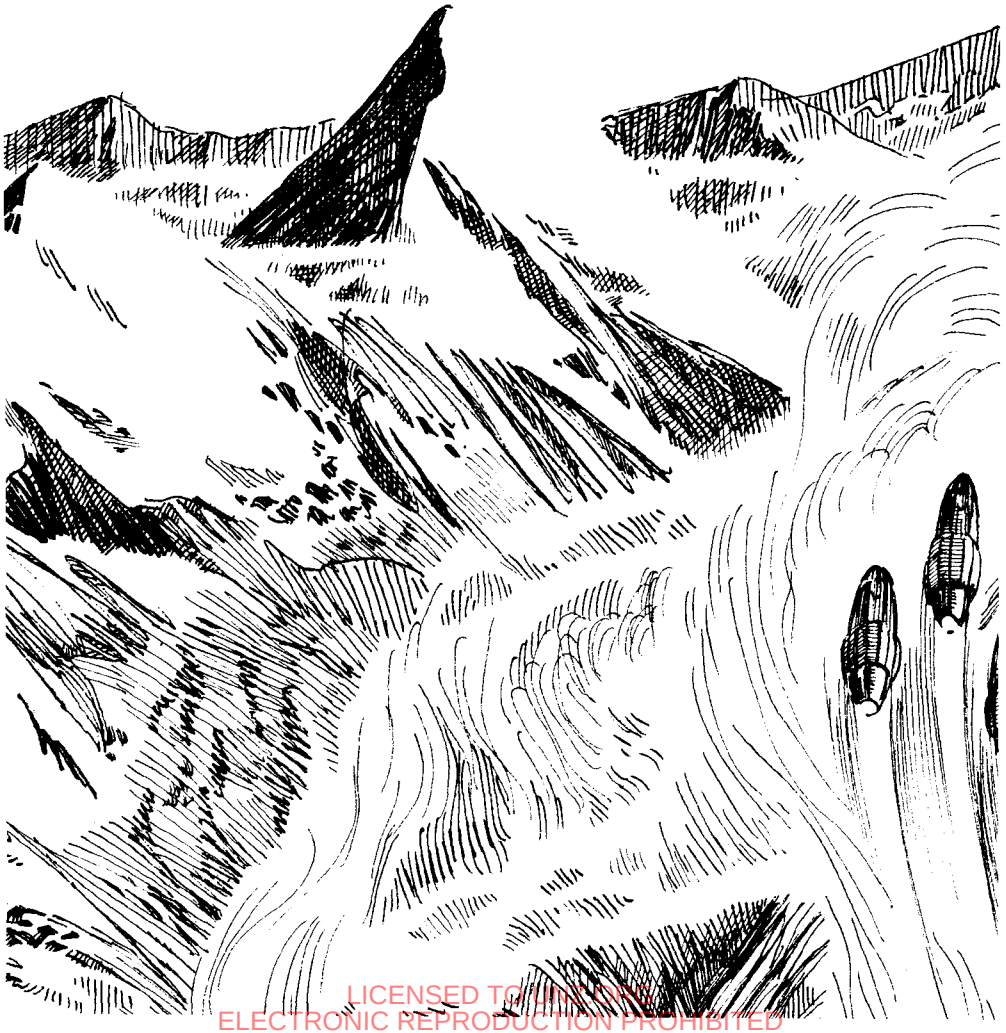
PONTIUS PIRATES

You might say that a good cop should be economical in his work—or that he should always mind his fences; it comes to the same thing in any age or any stage of civilization!

J. T. MCINTOSH

Illustrated by Leo Summers



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My head spun in wide, erratic ellipses, gaining speed on the way down, losing it on the way up.

I wouldn't have been making any effort yet to face the not-so-new day but for the fact that my call-sign was blaring with sadistic insistence through my cringing, cloven head. *Seven-seven-two . . . seven-seven-two . . . seven-seven-two . . .*

When the telephone is in your own head, you can't pretend to be out. Anyway, this message was costing about fourteen million dollars to send: IP must think I really ought to get it.

I couldn't reply. Molle was too far from IP headquarters on Earth for ordinary radio to be of any use at all as a means of communication. There was only one way I could tell HQ anything, once, basically by the same means as I was receiving this call. Owing to the extra organization involved, however, my call would cost about eighty-nine million dollars—if I ever made it.

Nobody could listen in on my strictly private wave length, because it was being picked up and unscrambled by a tiny receiver in a steel plate in my head, so installed that doctors who examined me were guaranteed to report that it was an ordinary steel plate placed there for ordinary surgical purposes after a head injury.

I wished I couldn't hear the message either. It thundered through my brain, echoing through the empty caverns of reason, rattling every bottle in the cellar of memory.

Cluster of raids in Severn System yesterday was biggest Buccaneer operation since early Solar System raids. Estimated haul, seventy-four billion . . .

There was a lot more of it. It had been a typical Buccaneer raid—no warning, no clues afterwards, no casualties on either side. The Buccaneer raids were a new type of crime, and so far Intergalactic Police was groping blindly in the dark, guessing wildly, more at a loss than any police force in history had ever been in any crime wave.

Anyway, IP hadn't spent fourteen million dollars to tell me the details of the raid, to boast masochistically of IP's latest ignominy, but to warn me—as undoubtedly dozens of other operatives were being warned simultaneously at staggering cost—of the possibility of the return of the successful raiders within the next twenty-four hours. Return to where? Well, if we knew that, IP wouldn't be baffled. The idea was, some IP man somewhere maybe me on Molle—would get wind of the return of a fleet of spaceships . . .

When the message ended I sighed with relief, for there was nothing in my head any more but the ten thousand little red men driving ice picks into my soggy brain cells.

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I sat up in bed and groaned with the effort. I appeared to be naked, which was rather remarkable. Evidently I had managed to get my clothes off, and that, after such a binge, must have been a considerable achievement. Sure, my clothes, I now observed, were hung up neatly on the floor. But you couldn't expect miracles of a man who'd been taken drinking, almost the moment he stepped off his ship, by four Mollean cops determined to drink him under the table and not playing fair at that.

Oh, they hadn't doctored my drinks. There had been no need. Molle had the usual general types of liquor, if not in the familiar forms, and I'd had to allow myself to be persuaded, as a tourist with only forty-eight hours to spend on the planet before the ship hopped on to the next stopover, to try them all—spirits, liqueurs, wines and beers. But they, the four cops, though appearing to drink along with me, had had watered-down drinks. A true drunk, as I'd been, always spots the fake drunk.

There had been a girl, early on—the original come-on. But she had quietly disappeared when she'd done her job, once I was supposed to be hooked by wine and no longer interested in women and song.

I wasn't worried about the episode. I had a cosmic hangover, but I wasn't worried. The affair had been purely routine. The cops had been ordinary plain-clothes Mollean cops, young guys, merely pumping me as a Terran tourist who might conceivably have something to hide. It was an old Mollean custom, no doubt.

No, nothing had happened and I could now consider myself clean as far as Molle was concerned. It wasn't worth trying to remember what had happened and exactly what had been said.

Spurred by the message from HQ, I bravely swung my legs out of bed and reached for a robe.

The bathroom door opened and a shapely brunette casually draped in a towel stood in the doorway.

"Congratulations," she said. "Jack Sheridan returns from the land of pink elephants—laughing and dancing."

"Don't shout," I begged. "And what's that awful roaring noise?"

"I'm running a bath, idiot."

"Then go and take it. And shut the door."

She grinned and went back in the bathroom. The bolt was shot loudly. Then, more quietly, but still quite audibly, it was withdrawn.

I had managed, I hoped, to act fairly normally and yet get rid of the girl—she was the girl of the night before, of course, and I knew her only as Perri—so that I could make an effort to think.

I was worried now.

I was in a fix, a frame, a plot. At the least, a more thorough po-

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lice investigation than the routine check I'd decided was already satisfactorily completed.

The girl had not come home with me. The last I'd seen of her was when she walked out on what had turned into a drinking party.

There's something rather special about the way drink hits me, and I've often found it useful. It was because of this that I'd cheerfully let the four men (I now wondered: were they cops after all?) carry on as they wished the night before, even with everything in their favor —their drinks watered, mine full strength. If it hadn't been for my special faculty, I'd have turned the situation somehow—insisted on going with Perri, for instance, when she walked out.

Drink hits people a million ways. Lots of people can act three-quarters normal when by rights they should be flat out. Finally they flop, and the next day they don't remember a thing after the fourth drink.

Now, I don't inspire any confidence after even the second drink. My speech goes almost right away. Then I get clumsy handling cigarettes, and burn myself between the second and third fingers of my left hand. I fall, or nearly fall, every second time I go to the men's room, which is often. I tell the same story repeatedly, earnestly, pleadingly. And there's no acting about any of this. It's how I am when I've had a few drinks, that's all.

But next day, with an effort, I remember everything that happened. I remember better than when I'm stone-cold sober. I have total, undiscriminating recall.

This talent is so rare that it never crosses anybody's mind that I can possibly possess it—especially after he's seen me with a few drinks in me.

Perri, whom I'd thought to be a mere dumb, beautiful decoy, was something quite different. She was here to carry on the investigation of Jack Sheridan, tourist from Earth, after the four cops had left off.

One enormous mistake had been made—natural, but no less a mistake. Perri and those behind her assumed that because I'd been tight as a lord even before she left the party, the next day in my hotel room I'd assume anything she wanted me to assume. And this was quite wrong.

I thought back . . .

Nothing of any importance whatever had been said between Perri and me, of course. I might be expected to remember that later. She had acted like a girl who picked up men in bars—about the nicest kind of girl who could be picked up in a bar, certainly, and by no means a regular. But still a girl who went to hotel bars alone and didn't necessarily stay alone if things were right.

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She had not become careless, either, even after there was apparently no need to watch what she said to me. When she left, I now remembered, it was with the hint that she might come back later. So if I remembered next to nothing next day, that was all right. If I remembered a little more, I'd know she said she might be back. What nobody had taken into account was the possibility that I'd remember everything right up to the moment I flopped.

Hastily I scanned through what had been said after she went. I couldn't just remember it—I had to run it through like a tape recording, evaluating what I'd been utterly incapable of evaluating at the time.

The four young guys had pumped me about Earth. How did Earth feel about the Outer Alliance? It had been logical as well as convenient for me by then to pretend—and it didn't need much pretending—that I could scarcely remember what the Outer Alliance was.

Then they had started testing my condition. They asked me questions and later asked exactly the same questions, to see if I'd say: "I already told you." Then they told me things I didn't know, factual things like the distance between Scott, the Mollean capital, and other Mollean towns, and later asked me the distance between the two towns. Of course I had no idea.

And that was all. When I was just short of total incapacity they helped me to my hotel room and left me.

They had not asked me anything important or tried to insert false information into my sodden brain. Therefore—I looked at the closed bathroom door—the crunch was yet to come.

But why? How had I given myself away? Or been given away? I'd landed the evening before. Everything about me was in order, and Mollean security, if it was security, could have taken all I brought with me to pieces and found nothing remotely suspicious.

What bothered me most was not knowing what I was up against. It could be Mollean counterespionage. It could be police. It could be any one of a dozen bureaus.

I fought back against the hangover and got my robe on properly. Then I partially surrendered again. I was supposed to have a hangover. If I could appear to be worse than I was, so much the better—but could I be worse than I was and live?

I had a glance at the girl's clothes, neatly folded on a chair. Then I staggered across to the bathroom and opened the door.

Surprisingly, Perri went on making mistakes. Little ones, maybe—but a mistake is a mistake.

She'd elected to be with me in apparently intimate circumstances.

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She didn't have to pretend she'd spent the night with me. She didn't have to make her appearance in a careless towel, take a bath and leave the door unlocked. And if she did these things, it was simply no use making a poor job of the act.

But she was making such a terrible job of it she should never have started it.

First of all, her clothes weren't right. Oh, she'd had the sense to put on the same dress and shoes, since she was supposed to have been with me instead of slipping into the hotel room in the morning about the time when I might be expected to resume living. But a pretty girl on a cold world like Molle just doesn't dress the same way to pick up a man in a warm hotel bar at night and to face the new day the following morning, and she hadn't either.

And then, in the bath she had bubbles up to her chin. She was shielded by bubbles.

Her patter was O.K.—but the ear impression didn't cancel out the eye impression.

"Well, aren't you going to ask me?" she invited.

"About what?"

"About what happened last night. Because one thing's for sure, it's all a great big blank to you."

"Let it stay blank," I said.

That was a point to me, though only a flicker in her eyes showed it. She was all ready with a convincing, well prepared account of what was supposed to have happened after I was stinko, full of artistic verisimilitude and corroborative detail. But why should I listen? I'd learn nothing new by listening to a fairy tale.

"Do all Earthmen drink like you?" she asked.

"Everybody who drinks drinks like me. Alcohol invokes the law of inverse repletion. The more you drink, the more you have to drink."

That, too, made her think. Without really meaning to, I'd shown that I had some sort of a brain and that it was at least ticking over.

"I'll wash your back," I said, picking up a sponge.

"Sure," she said, shrinking.

Anyway, the bubbles saved her. But she still had to get out of the bath. "You haven't a robe," I said.

"No. I seldom carry a bathrobe when I go out for a drink."

I held a towel for her. "Right. Jump out."

"If you don't mind . . . I'm shy," she said quietly.

I grinned and let her off the hook, bringing in her clothes and then leaving her, closing the bathroom door behind me. She was beginning to show a little more sense. Anybody can be shy. It's when people feel forced to pretend to be what they're not that the whole act flops.

I got dressed and had a slug of Mollean brandy, more to anesthetize my protesting belly than to re-

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store it to working order. It could stay out of order as long as it liked, for all I cared. The brandy did something for my head, too. The red devils didn't stop working my brain over, but half of them went for lunch.

Perri came out of the bathroom, confident and poised again now that she was dressed. "I take it the deal's off?" she said briskly.

I had to ask: "What deal?"

"I thought I might have to remind you," she sighed. "You're here until tomorrow night, when the *Jupiter* moves on. I've got two days off. But I've got no money. You're here to see the sights, you're alone, and you've got plenty of money. Last night it seemed a good idea for me to be a sort of unofficial guide. I show you the sights, and you pay the bills. But schemes like that don't sound the same way the morning after, do they?"

"It still sounds pretty good to me," I said. I tried not to put any emphasis on the "still." This was the first I'd heard of the scheme.

I had to work the elevator myself. There are no Mollean elevator boys, messengers, waiters or servants. They've got Socialism, and nobody is anybody else's serf. You wait on yourself at table, fetch your own drinks, and make your own bed. This wouldn't be so bad except the self-service machines are often empty. Jobs go begging on Molle, particularly in Scott, the capital, and the maintenance staff work is seldom right up to the minute.

Perri had gone to her apartment to change and get some things. I couldn't quite see why it had to be done this way, but obviously it had to be, because I was being maneuvered. I was quite prepared now and then to dig my heels in and say "We won't watch the seals, I want to see the parrots instead," but I had to reserve such obstinacy for situations where it had a definite value.

We were to go to see the summer camp at Tycho. Perri had said that after the two-hundred-mile railcar run, a couple of hours in the sun and maybe a tentative bathe, I ought to be fit for a light lunch. She'd wait, she said, warning me that by that time she'd be very, very hungry.

I stepped out of the elevator and hung up my key at the desk. Then I was swung round and punched on the nose.

The man facing me was a total stranger. He was about my height and less than my weight. And he was very angry. Already he was swinging again.

"Here, wait . . ." I said, but you can't reason with a guy who's hitting you. He hit me on the jaw, rather too hard and expertly for my liking, and I had to check myself or I'd have floored him. Instead I flailed inexpertly, protested

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incoherently and tried to back away.

To my relief about half a dozen bystanders caught the angry man and held him.

"What's this all about?" I demanded.

"You hit me last night," the stranger gasped. "You were drunk, but not *that* drunk . . ."

A Mollean cop in the curious gray uniform they wear, rather like Russians about to do a Cossack dance, appeared implausibly in the foyer. "What's going on?" he demanded. "What's the trouble?"

I don't claim I analyzed the entire situation in a flash, but I did get some essential glimmers. I had never seen the angry man before, so I couldn't have hit him. This was more Mollean maneuvering. Although the whole picture was not revealed to me, the important part of it was: I was supposed to protest vehemently, the cop would take notes, and I'd be stuck in the capital until a minor court settled the issue, probably the following afternoon. When Perri arrived to take me to Tycho, I'd be unable to go, because I'd been warned not to leave the city.

I took over. "Nothing," I said, smiling. "There must have been some misunderstanding. Perhaps a case of mistaken identity."

The man who had hit me on the nose shouted: "It was you, you—"

"Excuse me," I said. "I have a date."

I had to get away with it. Perri couldn't play a part right, but I could, if I had to. The angry man had to stay angry, aggressive. The cop had to stay a puzzled cop, because nobody, apparently, had told him anything. The rest of the people in the foyer probably weren't in on this. And I, despite my cloven head, was suave, urbane, almost bored.

I had to get away with it, or the fix would have been stripped naked.

Perri was waiting outside, wearing a white coverall and carrying a small bag, for according to plan we were not supposed to return to Scott that night. When she saw me she tried to pretend she wasn't waiting, that she was on the point of entering the hotel.

"Let's go," I said, taking her arm.

"Tycho?" she said doubtfully.

"Why not?"

She had the sense not to ask if anything had happened, and stopped herself—but only just.

The overhead monorailcar was always a good idea, or nearly a good idea. It was invented on Earth in the year dot, but nothing much ever happened about it. If there was a railroad, you didn't really need railcars. And, of course, there were snags about a railcar system. Either you ran it practically at ground level, in which case two rails on the ground were bet-

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ter in most respects than one rail in the air, or you lifted it high so that roads and rivers and houses and fields underneath were unaffected. In that case you needed pylons, big pylons, and a lot of them. And pylons needed ground to stand on.

On a world at a fairly early stage of development, the idea made sense, I guess. Nobody had any rights in wasteland. Transportation could be in a straight line from here to there. Instead of building roads and bridges, boring tunnels, blasting out cuttings, you sent out heavy squads to build a line of pylons. Once a long, straight, flat, single rail linked two places, high above fire and flood and snow, the rest was easy.

As we sped high over the rather uninteresting Mollean landscape of rocks and bracken, we chatted casually until suddenly I found we were talking about the Buccaneer raids.

I hadn't brought up the subject. I hadn't even directed it along lines that might lead that way. It was Perri who wanted to talk about the Buccaneers.

She took the line that they were modern Robin Hoods of space, mysterious and highly romantic. She thought they must be a small group directed by a single mastermind.

"Lady," I said, "you couldn't be more wrong."

"Oh, I know you come from Earth, and Earth has suffered most from the Buccaneer raids—"

"Entirely," I said. "Exclusively."

"What about all the raids nowhere near Earth?"

"The loot is always Terran resources, either sent from Earth and having to be replaced by Earth, or goods consigned to Earth and paid for."

"Well, you can't be expected to see it as we do. I'm not saying there's ever anything fine and noble about crime—there isn't. But the Buccaneers have never killed anyone, and Earth is so rich—"

"The difference between Robin Hood and the Buccaneers," I said, "is that Robin Hood robbed the rich to feed the poor, and the Buccaneers rob the rich."

"But all the same, think of it—a small group of adventurers taking on the might, the power, the resources of Earth and winning. It's David and Goliath over again."

"No, it's not," I said sourly. "David really fought Goliath. Goliath knew who he was fighting."

I hadn't previously been prepared to give this girl high marks for acting, or even a pass mark as a counterspy, or whatever she was supposed to be. Certainly she had intelligence, but it takes more than intelligence to guarantee efficiency in a highly specialized job. The best cop I know attributes his success to brute force and ignorance.

But now Perri was ringing true

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as a nice girl who didn't know much about anything, honestly thinking that the Buccaneers were no more formidable than the Pirates of Penzance and probably went about their work singing, too.

I told her. I didn't tell her as a Terran to a Mollean, as an alleged tourist to an alleged office girl, or as a real foreign investigator to a rather unreal counter-agent. I just told her.

"To begin with," I said, "the Buccaneers are no tiny group of laughing playboys. You can't mount their kind of operation from a backyard or even a satellite or dead world. If you really look into the Buccaneers' record, you find that they're even more than big business. More than criminals, too. In fact, not criminals at all."

She knitted her brows. "What, then?"

I didn't answer directly. "Starships and thousands of men are involved. The biggest of big business somewhere, somehow, might be able to put up the stake. Big business or criminals or both working together might plan, set up and carry through a typical Buccaneer raid. But it would be the first and the last."

"Why?"

"Because they'd never get away, even without the loot. Superlux travel hasn't for centuries been in private hands anywhere. The ships are so big and complicated and expensive and need so much know-how to operate that the Buccaneers *can't* have ships of their own. It simply isn't possible. The amount of variety of raw material, equipment and skill that has to go into every one of the thousands of superlux ships in the galaxy is so staggering that only, possibly, Earth might conceivably build and operate a *secret* ship. And in practice even Earth couldn't do it because there are too many visitors, everything is so extensively documented, too many people would have to be in the know—"

"Molle's Triline Inc. and Spacecarry Corporation are private firms," she interrupted.

"Only nominally. The Mollean Senate has at least five fingers in each pie."

She let that go.

"So as we all know," I said, "the Buccaneers aren't a happy little group of handsome, dashing pirates. What's happening is undeclared economic war. The Buccaneers are a world or worlds bleeding Earth by knife-thrusts in the dark. Probably only one world, since the secrecy has been preserved so well. The pirates are sitting-on-the-fence pirates, careful not to kill but merely to rob. They're Pontius Pirates, cautious, looking both ways, trying to be in the clear whatever happens. They're smooth, they're clever, so far they're successful, they're too careful to be romantic, they have lying tongues behind the bland

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front they've got to have—and if you consider them closely, whether you're a Terran or a Mollean, they stink."

"I think I see," she said.

The railcar sped on. Perri was looking straight in front of her, not out of the window, either pretending to think about what I had said or really thinking. She didn't ask any more questions, though all I'd given her was the barest outline.

I'd told her what I had partly because, although very little of what I'd said had ever been put that way in newscasts, magazine programs or other popular information media anywhere, none of it was any secret. As a tourist supposedly visiting Molle because I had space-travel connections and a certain firsthand knowledge of the planet might prove useful some time, I could be expected to know all I'd said and more.

So could Perri.

Not as an office girl in a textile firm, of course. But she wasn't that. Anyway, she wasn't just that.

If it hadn't been for the man who had hit me in the foyer, I might have been able to believe Perri was near enough straight. She'd gone to the bar and picked me up because she'd had a row with her boy friend and felt like breaking out. The four cops really did work at her office, as far as she knew, and her slightly disgusted walkout on the drinking session had been genuine. She called the next morning to see how I was, and in the mood of the previous evening, when she went to the hotel bar, she decided to play me for a rich sucker—or something.

The foyer incident, however, couldn't be brushed off.

I might believe—if drink hit me some other way—that I'd happened to run into a guy I'd happened to annoy. I might also believe that the cop had merely chanced on the scene at the vital moment. But chance couldn't explain why Perri arrived at the hotel, waited outside, saw the cop go in, and didn't expect she and I would still be going to Tycho when I came out.

She was in it. That was undeniable.

So why did she pretend not to know the most elementary facts about the Buccaneer situation?

I wondered what they'd try next. The fact that I didn't know which particular "they" I was up against didn't make things any easier, or more comfortable.

Previous reports on Molle by IP operatives, who landed as tourists and looked around briefly, had excited curiosity mainly about the form of government there. Whatever it was, and there was some doubt, it worked, apparently. The police ran routine affairs, a small army-navy-air-space force stepped in in emergency, and behind the scenes was a shadowy Senate. Where the Senate deliberated was no

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secret—the Administration Building was the largest in Scott—but there were no elections, spokesmen were always anonymous, and Mollean Senate communiqués to Earth and other powers were always signed just like that—Mollean Senate. If there was a king, president, prime minister or first citizen, he was singularly modest. If there was an inner council, upper house or cabinet, the members were as anonymous as spies.

None of this afforded strong suspicion that the Buccaneers were based on Molle. On the contrary, Molle was stable and progressive; development was proceeding smoothly and successfully; if the people had been duped by the idea of not being serfs into being peasants instead, they were obviously perfectly happy about it. There seemed to be no civil trouble, and as far as IP had been able to find out, there *was* no trouble.

But of course, in the nature of my job, I assumed: *Molle is the Buccaneer base.* This might not be the only way to operate, but it was my way. If the real base was Tripton or Sollo, I was on a dead-end kick anyway: I wasn't going there.

If the Buccaneers were Mollean, I was going to know before I left on the *Jupiter.* If they weren't, I was going to know. Otherwise I'd rate no higher as an investigator than . . . well, Perri.

The railcar slowed smoothly, and we were at Tycho. I didn't see much of the place from the air, because I was making sure that Perri and I would alight in the middle of the passengers, neither first nor last. If "they" were going to try anything else here and now, I couldn't stop them, but why make it easy?

But I did see that Tycho, the Riviera of Molle and indeed the planet's only summer playground, made the overcrowded beaches of Earth seem like deserted wasteland. The place was teeming with humanity. Four railcar termini met there, from north, south, east and southwest—northwest lay the Devil's Teeth Mountains, and utter desolation.

We came out on a typical high-level platform and descended without incident to ground level. Nobody swung at me. Our tickets were O.K. In the arrival hall, nobody looked at us.

A man in a peaked cap asked if we wanted to use the cloakroom. He wasn't a serf, of course; since his job was menial he was honored with a title, stationmaster at least.

I said yes at once, wondering if Perri was going to be caught out.

She wasn't: she really had packed her bag as if we were going to Tycho. It would have been idiotic not to, of course. Even if the assault scheme had worked and I'd been confined to Scott, she'd have been with me and I might have found out what was in the bag.

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When she emerged into the white glare of the artificial summer camp she was modestly frivolous in a white sunsuit which, though it didn't reveal much, looked as if at any moment it was going to. The only thing was—would a girl who picked up strangers in hotel bars and went home with them afterwards dress for a holiday camp like a fifteen-year-old girl from a convent school?

I was in shorts, if anybody cares.

Tycho was big, but not nearly big enough. I decided at once that this place wasn't going to be any fun. When you go to a beach you don't necessarily want twenty square miles all to yourself, but you do want twenty square feet.

We fought our way down to the lake. The heat was beamed at us from thousands of reflectors about fifty feet up. Without the beams the temperature in Tycho would have been about ten degrees Centigrade. But Molle had plenty of uranium.

We had nearly reached the lake when I had a piece of what might be luck.

About a dozen laughing teenagers coming the other way were passing us when one of the girls caught sight of Perri and stared.

"Hi, Perri," she said. "I thought you were cramming desperately for the economics exam."

Another girl said: "Well, of all the . . . You couldn't come to the Socialist Club, you couldn't sell programs at the college play, you couldn't—"

"Let it go, Meg," said the first girl, and pulled at the tall blond guy with her. The girls in the party all gave me the once-over, the men, slightly puzzled, glanced at Perri, me, and then Perri again, and rather awkwardly the group moved past us, not laughing until they were at least twenty yards on their way and lost in the crowd.

"I go to night school," Perri said. "I'll pass that exam. It's in the bag."

"Sure you will," I said, as if it was the last thing I wanted to hear about.

The kids weren't office workers. They were college students. Perri was a college student, too.

We swam, lunched with twenty thousand others in a vast cafeteria, sunbathed, and then I bet Perri she couldn't swim across the lake and back.

It wasn't a brilliant ruse. I didn't want to be brilliant. I'd let myself sulk because she could swim better than I could, trying to make out that if I were in top form I could swim rings round her. The across-the-lake-and-back bet was sour grapes . . . "You're not *that* good."

It was all a bit silly, the sort of thing that happens when one out of two has a hangover and the other hasn't. So it was fine.

She waded in, struck out, and I had a chance to think.

She was a college student. She

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looked about seventeen or eighteen, and now I believed she was. You can't be sure about girls' ages, not in my line of business, not when it may be vitally important whether a girl is just a kid or about twenty-five, in which case she may have the experience and dedication and steely efficiency to tie you in knots. Girls of twenty-five don't have lines on their faces, false teeth, gray hair and sagging figures; if it matters, they can pretend to be a lot younger.

But there's always a risk in pretense. So from early history, real kids have been used as pawns in deception. Kids of three or four genuinely believing what they're supposed to tell. Kids of five or six, cruelly misled, set up to tell lies and then, maneuvered, to reveal a false truth. Kids older still, yet still kids, set up even more cruelly to resist bravely and then be broken, utterly convincing because they're utterly convinced.

I had not given myself away. I knew it; I had doubted it because after what I took to be a preliminary, routine check I found myself nursemaided by a girl who might rate higher than four young cops.

But the college students knew that Perri was studying for an exam.

In my line, you don't have a chance to ponder over a point for twenty years. You make a quick test, and the answer comes out: and my answer was confirmed when Perri came running back.

"The bet's off," she said breathlessly, dropping on the grass beside me. "It's too soon after lunch."

That was pretty weak, so weak that I decided not to go along with it. I was not supposed to be a moron.

But then three girls ran past us and plunged in the lake. There were no men with them, and yet all around us there was a sudden electric awareness of the three girls and . . .

They didn't swim far. They came back, laughing, and lingered on the shore. They seemed unaware of the hundreds of eyes on them.

Well, nobody was staring at them because they were the prettiest girls within a thousand miles. They weren't ugly, except perhaps the tallest one, but there was nothing in their looks to cause any sensation anywhere. Nor in their swimsuits—and yet . . .

"For Pete's sake," I said. "That can't be a Perrichon bear suit the blonde is wearing . . . ?"

"Very likely," said Perri indifferently.

"But it must have cost thousands . . . and she's been in the water with it. Doesn't she know?"

"She knows."

Perrichon bear was not quite the most expensive fur in the galaxy. The snag about it was that owing to certain peculiarities of Perrichon, where water was rare and rain unknown, the animals of the world

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had an unusual metabolism . . . Within a few hours of being thoroughly soaked, a Perrichon bear fur disintegrated.

"You know who they are, Perri?" I asked.

"They're the daughters of Commissioner Lewis."

"Scott's police chief?"

"That's right."

I said no more on the subject, and apparently lost interest in the three girls.

It took me hours to put into effect the plan I'd had all along, without letting Perri know it was anything but a sudden whim.

Now and then helicopters landed and took off at the field beside the station, and presently I said: "Why use helicopters when the railcar's quicker?"

"It isn't always," said Perri. "We never went in much for roads here. So before the railcar, most travel was by air. Now there's less air travel, and hardly any long private flights. But the railcar is essentially a straight-line means of transport. You may have to travel one hundred sixty miles to make a sixteen-mile trip . . ."

I knew all this. On Molle you didn't own a car for personal short-distance transport, because except in the towns, which weren't large, there were few roads. You had a simple, slow helicopter instead, the kind of hopper which could do a twenty-mile trip in twenty minutes, including takeoff and landing. Such hoppers could be hired easily. You took the railcar to within fifty miles of where you wanted to go, and hopped the rest.

After we had swum in the lake again and were drying out in the artificial suns, drinking iced beers, I surveyed the hordes of Molleans, young and old, grilling themselves gratefully in unaccustomed heat, and said: "If Molle only had one *natural* hot spot, nobody would bother coming here."

"Oh, but there are lots of natural hot spots," said Perri, telling me what I knew. "There's the Newgobi Desert, and the Equatorial Pampas, and the—"

"Sure, I know," I said. I was playing the part of a man who had read a book on Molle, or at least a booklet. I knew plenty—but there were great gaping holes in my knowledge. "Tell me why they're not developed as tourist spots, then."

"Water. No good supply within three hundred miles. Air transport's no use, railcars have a small cargo capacity. A three-hundred-mile pipeline would be needed."

This was on the top of her tongue, from a recent college lecture, no doubt. I asked questions, and she told me a lot more I already knew. But I'd planted the idea—for the two of us, wanting to sunbathe in peace and quiet, Newgobi or the Pampas would be vastly preferable to Tycho.

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And presently Perri suggested hiring a helicopter in Tycho. Then we could fly anywhere we liked.

"At the breath-taking velocity of sixty miles an hour?" I said.

"You said you had plenty of money. We could get a fast helicopter."

"There's no difficulty in hiring one?"

"For you, perhaps. Not for me."

So I let myself gradually come round to the idea of hiring a fast helicopter.

I was completely certain that it was no part of any Mollean plan to insist on my making an air reconnaissance of the planet. Perri's superiors might or might not mind; but having attempted to confine me to Scott for the duration of my short visit, they could have no particular desire that I should be able to fly anywhere I liked, completely free save for the presence of Perri, whom I would not be allowed to shake off.

If I'd announced right out that I'd like to do this, I would have aroused suspicion which on the whole I believed was dormant.

But I'd managed to arrange things so that Perri honestly believed she'd suggested hiring a helicopter, and a fast long-range one at that, to take me to Newgobi or the Pampas.

"O.K.," I said at last. "You go and fix it."

"Aren't you coming?"

"Later. You're a citizen of Molle. You hire the helicopter. You won't need money. I'll pay when we pick it up."

She stood up and put on her white sunsuit over her bathing costume. Then she picked her way up the beach.

It was late afternoon when we took off, but our machine, a real snazzy model with a 20,000-mile range, a top speed of 330 m.p.h., two cabins and a magnificent store including a compact automatic chef and a wine cellar, could get us to Newgobi in time for a couple of hours of sunbathing before dusk.

Perri was now silent and withdrawn. Well, if anybody ever flatly refused to look before leaping, it was Perri.

I'd have to talk to her about it soon.

No IP operative worth his salt wants action, fights, adventure, drama, sex, civil disorder and firing squads, or allows any of this irrelevant nonsense to happen if he has any chance of stopping it. Usually he forms a theory: if A is so, such-and-such should be a way of finding out. If A isn't so, the whole thing is a waste of time unless he manages to find definite proof that this is the case, and then it's a valuable, if negative, investigation with a neat double line after it.

I was interested in nothing but whether Molle was the mother of the Buccaneers or not. If Molle was, I'd tell IP so, preferably without

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drama, and the consequences would be of no more than academic interest to me. If Molle was not, again I'd say so, naturally less certainly, because it's usually a hundred times more difficult to prove a negative than a positive.

Before I went to Molle, before I met Perri and the four young cops, before Perri had pretended she'd spent the night with me when I knew damn well she hadn't, before the abortive effort to anchor me in Scott, before I learned Perri was a college student—before all this I had decided on my plan of action. What had happened since, and that wasn't much, had merely redirected the same plan.

Perri had to be allowed to hire the helicopter and call her bosses. They might have vetoed the idea of letting us fly all over Molle, and taken steps to implement the veto. Regulations would have been easiest: a forty-eight-hour tourist, merely looking around while his ship unloaded and reloaded, couldn't hire a long-range helicopter—or something. They could have had me arrested. They could have taken Perri out of the picture on some pretext.

They hadn't.

"You're an orphan, aren't you, Perri?" I asked.

"Yes . . . how did you know?"

"Instinct. And you work in an office."

"Yes." She was uncomfortable.

"And you go to night school."

"You know I do. What of it?"

"Are you hungry?" I asked.

"Yes." The poor kid didn't know where she was at. On the one hand *They* were instructing her; on the other, I was with her, no longer laid low by a hangover, not pretending to be an idiot, casual one moment and putting on a little pressure the next, and she had to pretend to be umpteen things she was not.

"How about fixing dinner? We'll eat on the way, and catch the last of the sun when we land."

"Sure," she said.

When she had gone, I set the helicopter on automatic and looked for the bugs. There wouldn't be a vision link—it was too easy to find. I was careful. I limited the possible places to seven, which was good going. If there's one thing I'm good at, it's smelling out bugs.

I didn't do anything about them.

We dined on strange delicacies in the main cabin. By this time I was practically a hundred percent, able to drink wine and let it affect me and indicate through the bugs that it was affecting me much more.

We landed on the edge of Newgobi. I switched off the ignition and we went out and lay on the hot sand. The helicopter, its door shut, could not be relaying a thing. The only question was whether Perri was equipped as a transmitter. She could be—her white sunsuit was substantial and might easily hold a transmission bug capable of reaching the helicopter at least. So I got her to shed the sunsuit, which she

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did without concern because she still had her black swimsuit underneath, and we moved a hundred yards to the far side of a sand hillock.

Then I searched her for bugs.

If we'd been watched, if we were still being heard, if Perri rated higher in the Mollean scheme of things than I believed, I might have been making a terrible mistake. She fought fiercely but silently, and I satisfied myself completely that nobody could possibly be listening in.

"So," she said fiercely, "you're a spy."

"So," I said mildly, "are you."

"A spy? Are you crazy?"

"A college student who pretends to be an office girl. Who picks up men in bars. Perri, if I'd been blind, deaf and dumb last night instead of just drunk, I'd know you never came home with me. But suppose you had. Just try to imagine, as I'm trying to imagine, that you really did stay with me last night. When I started to search you just now . . ."

I didn't have to say any more. To do her justice, she knew when the game was up, when protests were a waste of time.

Presently she was begging: "Don't give me away. They do this, the anti-sedition organization. It's routine. Individual tourists arrive, people who might be anything. There may be fifty on any ship that lands—"

"And they're all watched?"

"Monitored, the ASO calls it. Somebody goes around with them."

"Anti-sedition," I murmured thoughtfully.

"Well, I don't know what ASO really is. If I tell you what I know, will you promise . . . *promise* just to carry on as if nothing had happened?"

"I think I can promise that," I said. But what I meant was not exactly what she thought I meant.

"Molle isn't exactly a tourist center, but inevitably there's a fair number of visitors . . ."

Inevitably, I thought. Because any world that deliberately and openly restricted visitors was asking to be investigated the hard way—or one of several hard ways.

". . . There aren't enough police, or agents, or detectives to keep a constant watch on all these people, because Molle isn't a police state, so . . ."

She was right: unless Molle was *openly* a police state, it wouldn't be practicable to have enough agents to keep a watch on all tourists.

". . . So ASO recruits amateurs, I said. "College students and such."

"Sometimes. I think Irwina knows —that girl who spoke to me first. She may have worked for ASO."

"And you? Before this?"

"Once."

"Did you sleep with him?"

She didn't take offense. She was too earnestly, pleadingly set on having me cooperate in deceiving ASO —which was a laugh.

"It was an old lady. Well, not old.

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In her fifties. She came to study Mollean birds."

"There aren't any."

"She didn't believe that. So she came to study them. She went all over the place, looking for birds."

"Didn't anybody assault her in a hotel foyer, so she'd have to stay in town for a court hearing?"

"Well . . . that. I was told I'd get an *in absentia* pass in economics if I helped ASO. You were described, and I was told what to do. You didn't flop last night as soon or as completely as they expected—you managed to get to your room, with some help. I went and saw you later, and you really were switched off. I slept at my apartment, but came back early. What did I do wrong?"

"Everything," I sighed. "Go on."

"I was to take you to Tycho. That would be an excuse for me to say, when you woke up, that I'd have to go home and change. When I went home, he was waiting for me."

"He?"

"The same man. He told me, pack a few things for Tycho, go back, wait outside the hotel. There would be an incident. It wouldn't be much, but you'd be restricted to the capital. After that I could take you anywhere you or I liked, in Scott. I did as I was told—but it didn't happen that way."

"No," I said. "Who would expect it to?"

Maybe I should have hit her over the head. For that matter, leaving her in the desert might have been enough. And it might not. Almost certainly ASO—or whoever I was really up against—knew where the helicopter had landed, and might investigate.

Since she really was, I fully believed, an innocent, I appealed to her sense of romance, of fair play, and set it against patriotism.

"Look, Perri," I said, "my one interest is in the Buccaneers. If Molle isn't the home of the Buccaneers, I'm wasting my time, you're wasting your time, ASO's wasting its time. No action of any kind will be taken, in fact for all concerned it will be a good thing if I can report the Buccaneers aren't here."

She nodded.

"Now suppose the Buccaneers are here."

"They're not. I'd know."

"I believe you believe that, but you're wrong. You wouldn't know—though you should . . . No secret can be kept if too many people are in it. If this were the Buccaneers' base, and ordinary citizens knew it, why then . . ."

I shook my head.

"What do you mean, I wouldn't know, though I should?"

"Tell you afterwards. Anyway, suppose the Buccaneers are here. I'm a member of IP. Not a spy, a policeman. Not just a Terran, either. I'd have to act pretty much the same if the Buccaneers turned out to be Terrans. You agree the Buccaneers

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have to be found and stopped—despite what you were saying in the railcar?"

"Yes," she said slowly. (I was right: she was fundamentally on the side of authority). "But what happens to the Buccaneers themselves? Are they all to be lined up against a wall and shot?"

"No. There's no murder charge against them. They've been very careful about that. Since it's a galactic matter, we'll have to lean over backwards to be just . . ."

"I couldn't," she said with sudden decision, *"help* you. I made a bargain. There was nothing about Buccaneers in it. I was to stay with you, and report. I gave my word."

"Sure," I said. "Report as and when you can."

She was hunched on the sand, arms clasped round drawn-up legs. Gently but firmly I pulled her to her feet. I took her throat in my arms and started to compress it.

She didn't struggle. Her air was cut off and she started to suffocate, and she still didn't struggle.

I let her go.

"I knew you couldn't do it," she said, rather hoarsely.

"Not when I don't know it's necessary," I admitted.

"Even if you did know it was necessary," she said.

Well, that was a theoretical affair.

"But I've made my point all the same," I insisted. "I could silence you. Then your word would cease to be worth anything to anyone."

She smiled.

It was a funny thing. While she'd been pretending to be a pickup girl who was with me for what she could get out of it, there had been no flicker of warmth between us. When I'd touched her, particularly when I started pawing her swimsuit to make sure she wasn't carrying the tiniest possible transmitter on her, she had acted like a priestess being grossly assaulted by a drunken sailor. Now that everything was in the open, she was relaxed, she liked me, she trusted me.

"Promise," I said, "to stay here and not shout or scream until I come back. If you don't . . . and I mean this . . . I'll have to knock you out."

Her gaze flickered in the direction of the helicopter, out of sight where we were. "You're not going to leave me?" she asked quickly.

"No."

"All right, then, I promise."

I went back to the helicopter.

I believed what Perri had told me. Molle watched every stranger, casually and cheaply. The university touch was near genius. At the college were thousands of youngsters, intelligent, healthy, attractive, adventurous, with plenty of time on their hands, scared only of flunking. Probably there was a standing arrangement with the college authorities. Students male or female whose work had shown that certain exams were mere formalities got *in absentia* passes while they were en-

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gaged on government work. And kids like Perri acted as guides to middle-aged bird-watchers, putting in an exhaustive report at the end of the desperate assignment.

Yes—near genius. The trouble was that genius always has been very close to madness.

The idea was magnificent—until a professional walked in. Amateur spies, or whatever they were supposed to be, turned in good reports of every stranger, and ASO—probably the main Mollean security bureau—had an easy job checking off names.

But when the professional arrived—me—he merely had to blow the system wide open, which was easy, because he was being treated as an ordinary tourist, under the ASO system, and then he got to wondering:

Why did everybody arriving in Molle, even slightly dotty ladies coming to look for birds in a world which had no birds, have to have a keeper? A round-the-clock keeper at that, for I hadn't missed the significance of the fact that Perri was supposed to be with me day and night, even if she had.

It was elementary: because Molle had something to hide. And the obvious thing for Molle to have to hide was that Molle was the mother of the Buccaneers.

I could be wrong. Anybody could be wrong, even me.

I approached the helicopter very cautiously at first, then changed my mind and walked up to it boldly, not even trying to open the door and enter in absolute silence.

In any conflict of brain, any undercover contest in which success depends on being smarter than the opposition, you have to take chances. If you don't, you let the possibility that a thing may be so prevent you from making a bold attempt to find out for sure.

If Perri, even in a swimsuit, had been carrying a transmitter, my search for it would have been the tip-off to ASO. But I had to find out.

If the helicopter was so ingeniously, comprehensively bugged that any search for the equipment must reveal itself at once, I was counted out before the bell for the next round. And it could be. It very easily could be.

My hope was that if Perri's assignment was routine—which seemed a good working hypothesis for many reasons, one of which was that if it was not I'd surely have been given a more experienced watchdog—such things as the bugging of the helicopter I had hired, not particularly suspiciously, would be routine also. Routine means not too much trouble, work, expense, or clearing up afterwards.

A transmitter with its own power not only needs a battery, it needs maintenance. But a transmitter linked to a helicopter's own power supply can be the simplest thing in the world. It's inefficient only in that

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when everything is switched off, the transmitter is switched off, too. That isn't much of a drawback. As a rule when people are in such a machine something's switched on—heater, lights, radio, air-conditioner. If nothing's switched on, there probably isn't anything to hear.

That was the chance I was taking. I was gambling that in switching off the ignition I'd switched off the bugs.

I checked the seven places I'd noted, and a few more elsewhere, and found two microphone-transmitters, one right at the back of the control cabin and one over the controls. The duplication was obviously not for additional security, but merely to ensure that conversation anywhere in the main cabin could be picked up. The bugs were all linked to the main electrical system. There seemed to be nothing elsewhere in the ship.

I left the bugs alone; it wasn't time to disconnect them yet.

Then I started looking for the judas—the direction-finder unit.

If it was worth while listening to what a suspect might say, it was twice as important to know where the suspect was. Ordinary radio direction finding could be employed, but that was unsatisfactory for several reasons.

Unlike the microphones, the location finder in the helicopter would operate at all times. Either it would have its own power, or it would be of a type which could be traced without self-power.

If it was in the fuel tank, I was sunk. In fact, if it was in any really subtle place, or fixed so that I couldn't shift it without ostentation, I'd have to think again.

However, what applied to the transmitters applied to the judas. The best devices were expensive and needed attention. Simple judas units worked nearly as well and needed no attention.

I thought for a while I wasn't going to find it. It could be a can among the stores, exactly the same shape, size and weight as all the others. It could be, and should be, in the frame of the ship, built in and completely undetectable without tools and know-how which I lacked.

But again, if this was routine there hadn't been a special helicopter waiting at Tycho for me to hire. I wasn't supposed to have got to Tycho, and the helicopter hire, I hoped, sounded to ASO like a spur-of-the-moment plan, as much Perri's idea as mine. So what had happened was merely that in the few minutes available before I might arrive to claim the machine I had hired, some minor ASO agent at Tycho had hastily bugged it. Later, he'd want to take his equipment back with as little trouble.

When I looked *outside* the helicopter, it wasn't long before I found the judas. It would have passed the most rigorous inspection by anyone who didn't know what he was looking for, but I did. It was a flat plate about fifteen inches long by six wide

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and two deep, placed against the metal underbelly of the ship and held firmly there by magnetism, sprayed over the right color and looking exactly like a piece of the ship. But when I pried it off and lowered it gently to the sand beneath, the ship's skin underneath was smooth and unbroken.

I went back to Perri. She was hunched up again, for warmth this time. Half an hour ago it had been hot. But when it starts to get cold in the desert, the temperature drops very quickly.

She jumped up when I appeared. "I kept my promise," she said. "But it's freezing. Let's get inside."

"Just a moment, Perri," I said. "I wonder if I made my point . . . I could tie you up and gag you. Kill you, for that matter. If I don't, you have to promise—"

"Oh, I promise," she said, shivering. "Anything to get inside where it's warm."

I had to keep her there a little longer while I explained what she had to promise to do, and then we went back to the ship.

My mental alarm clock wakened me four hours before dawn. I'd had about five hours' sleep.

I stood up and looked at Perri in the top bunk. She was fast asleep and would probably remain so for hours.

There were two two-deck beds, with curtains so that both sexes could be accommodated separately, and a large luxurious double bed beside the curtained window. Perri hadn't been able to see the sense in not using the best bed at all. And if we did use the bunks, we could both have lower berths and privacy. I had to point out that though she'd kept her word and acted normally the evening before while the microphones were still alive, I'd find it easier to settle if she was in a top bunk and I was in the lower.

I dressed quickly, leaving the curtains closed, went through to the main cabin and switched on the ignition. Last thing the night before, when Perri was getting to bed and we no longer needed heating or lights, I had switched off the entire electric system, putting the key in my pocket, and disconnected the microphones.

I started the motors, let them warm up, took off and headed northeast at top speed. Having set the automatic pilot, I began to think about breakfast. Neither the hum of the motors nor the motion of the flight had roused Perri, apparently. Breakfast with Perri would be very pleasant, I thought. So I contented myself with cereal and a cup of coffee meantime.

It was about three hours later, with the first streaks of dawn beginning to show from the air, though they hadn't reached the ground below yet, when Perri, tousle-haired, rumpled and sleepy-eyed, put in an appearance.

She looked doubtfully at the

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lights in the cabin, the dark sky, and the clock. "What . . . ?" she mumbled.

She had thrown on her short wrap and looked absurdly young.

"I didn't have to waken you," I said, "so I didn't."

"Where are we?" she demanded. "What's going on?" Then, half contrite, she looked around, remembering the microphones.

"It's O.K., they're off," I said. "Say what you like."

"You didn't tell me we were going to fly through the night. Or where. Or why."

"No. I'll tell you now. We're over the Devil's Teeth Mountains. I want to see them as dawn breaks."

"What for?"

"Because," I said, "if ships land on Molle secretly, they land there."

"Oh."

She didn't argue or make any comment. What I said was obviously true, even to her.

There's a lot of ice on Molle; most of Molle's water is ice, in fact. There's a lot of prairie, too. But you can't land spaceships on ice, or prairie, without leaving traces that may be visible for hundreds of miles.

It might be done in the Newgobi Desert. That was one reason why I'd been prepared to have a look at the place. But though Newgobi was waste, it was on the equator and surrounded by the most heavily developed areas on the planet. And a railcar route ran right through it.

No, there was only one big area of wasteland, almost entirely unpopulated, where starships could land regularly unknown to the average Mollean.

Ships could drop into any one of fifty thousand deep, lonely valleys among the Devil's Teeth and no one would be any the wiser. Some of those valleys were never struck by direct rays from the sun. In the black shadows huge jet-scarred areas of rock could remain invisible even when planes flew low overhead. And no planes flew over the Devil's Teeth, certainly never low.

I had no chance whatever of seeing a landing ground from the helicopter; that wasn't the idea. My idea was quite different, and dawn was the best time to test it.

Ships could land here. But if they did, men, materials and loot had to be ferried to other parts of the planet. For this, spaceships were out, planes were out, helicopters were out, trucks were out. There were only, indeed, two possibilities. There had to be either a surface communication route, some kind of train or railcar or hovercraft which wound its way over and through the mountains, or a tunnel, with heavy odds on the tunnel.

If you get high enough over a range of mountains and valleys through which a long straight tunnel runs, if you get there when the light is strong and of high contrast, you have a good chance of seeing *any* straight line.

Figure it out: the highest peaks in

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the Devil's Teeth Mountains were seven miles high, the lowest depths about the same. A vertical range of fourteen miles. Assume there was a tunnel, and that it was straight, which it would be—maybe in several sections, but undoubtedly straight through each section. The tunnel would cut through the heart of scores of mountains, and there it would be invisible. But it would also have to cross scores of valleys, and here the cars or trains must either emerge into the open and cross the gulf on bridges or overhead rails, or—the valleys would have to be filled in or covered or camouflaged.

So that was what I was really looking for—a line through the mountains, roughly north-south, curiously lacking in deep, open valleys. And I'd have found the home of the Buccaneers.

Well, I didn't find it.

I knew perfectly well, of course, that if the Buccaneers really had a reception center somewhere in these mountains, there might well be a defense station equipped with radar, listening devices and ground-to-air missiles. On the whole, however, I thought it was unlikely. When you've got a good secret setup, the best thing to do is trust it. If it existed, if it was as good as it seemed to be, planes could scour the area for weeks on end and find nothing. It would be lunacy to monitor and shoot down stray planes and helicopters which happened to fly over the area. They'd be missed, vast searches would be organized, and maybe the wreckage of a plane would be found, showing unmistakable signs of having been shot down.

No. They wouldn't even try to detect planes flying over—unless perhaps planes in the immediate vicinity of the base. If planes flew regularly, persistently overhead, something would have to be done.

Anyway, I couldn't find anything.

"Isn't it all imagination, Jack?" said Perri gently. We'd had breakfast, her first and my second, and if there was going to be any chance at all of keeping ASO convinced that I was just an ordinary tourist, we'd have to flash back to Newgobi pretty soon as fast as the machine would take us.

"What?" I said.

"The whole idea that the Buccaneers can be based here. I mean—aren't you like the kind of researcher who doesn't start out trying to find something out, but with a set, preconceived, stubborn determination to twist facts into—"

"Naturally," I said rather shortly. "Either Molle is X, or I'm wasting my time. From the moment I landed yesterday, I worked one hundred percent on the basis that Molle was X."

"But now you know it's not."

"Now I know it is. And that's what I'm going to report."

Her attitude was more of protest than surprise. "You can't do that," she said.

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I wasn't sure whether I could or not. I hadn't exaggerated except in using the word *know*. I was sure Molle was X. But it was semantically inaccurate to say I *knew*. I didn't know.

Even now I can't say for sure whether I'd really have reported what I told Perri I was going to. Maybe, when it came to the push, I'd have stopped short at strong suspicion, recommendations for further investigation, facts rather than opinions.

There was also the question whether I'd really have used the one IP homing pigeon, eighty-nine million dollars worth, on the planet to report what was, after all, a guess and maybe a wrong guess at that.

Then we saw the ships.

Perri saw them as soon as I did. There were three of them, small as starships go, evidently built as passenger ships rather than cargo vessels. They came down slowly and steadily, using Ester haze as cover. On the ground they wouldn't have been noticed, or heard, ten miles away. But we were high in the air, and the haze was set for a sky background.

Perri said not a thing. Indeed, after that she remained dumb for hours. It wasn't surprising: her world had turned upside-down.

Despite her earlier romantic notions about the Buccaneers, she was a conventional, law-abiding kid. She had not believed a word I'd said about Molle being the Buccaneer base, convinced that if this were so, she'd know already. So nothing that was happening bothered her too much, because I was a nice guy doing a police job, Molle was innocent, she was innocent, and in an hour or two she could tell the truth and the whole truth to the people who had employed her, and they'd understand, and I'd understand, and we'd all live happily ever after.

Yet Perri was no fool. When she saw those ships, she knew instantly that this changed everything.

We got away from there fast. I didn't want to look at the ships, or where they landed, or anything like that. It became at once a matter of extreme urgency to get back to Newgobi and do everything in my power to convince ASO that I was no more than they thought I was.

Perri sat in one of the passenger seats, not in the other control seat, not near me, and she didn't move or say a word.

Not long before we landed, I broke the long silence. "Perri, come here," I said.

She came over and sat in the second pilot's chair.

"You'll have to come with me," I said.

"Where?"

"Away from Molle. In the *Jupiter*."

"Huh?" She was really startled.

"Believe me, you're not going to be popular."

"I can see that . . . Jack, what's

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going to happen to Molle?"

"In a way, nothing much. The careful, cautious Pontius Pirates have certainly gone outside the law, but in such a way that the charges will have to be surprisingly limited, if they're going to stick. No loss of life. No civil disorder. No threat to public safety. No mutiny, treason, subversion or intimidation. Just quiet, careful theft of vast sums in cash or material . . . And this is something entirely new, a planet, or the government of a planet, being a felon. There will be some sort of interplanetary trial, and Molle will be found guilty. She'll be fined the whole total of her depredations plus —plus what, I've no idea. There won't be any argument. The galaxy can't afford to allow piracy."

"Many worlds will have a lot of sympathy with Molle."

I shook my head. "Not openly. Not when Molle is found out. You see—all romanticism aside—when there's a thief in any group, he's got to be stopped. It may be amusing when he steals from somebody else. But he may steal from you next and then . . ."

"Jack," she said steadily, "I'm a Mollean. I never thought of living anywhere else but here. Suppose . . . I'm asking for information, that's all . . . suppose I grabbed the controls now and crashed the helicopter, killing us both?"

And she put her hands on the controls, so that she could do it, whatever I did.

"I'll tell you," I said. "IP would get nothing positive. But an IP agent, on a job, would have been killed on Molle, on a forty-eight-hour stopover, where he had hardly been expected to be killed. Molle would be invaded by IP men. On some worlds, where there's a lot to hide, the death of an IP man wouldn't mean an awful lot. But on Molle—"

She let go the controls, to my relief.

"Thanks," she said. "I believe you. Next, suppose I stay here?"

"Well, Molle's found out. Whatever Molle does, the cat's out of the bag. You're not going to be popular—"

Suddenly she was pleading: "Jack was it just me? I mean, did I give the game away, though I didn't know there was any game?"

"No," I said. "Quite the reverse. You made me doubt things I was already sure about. You can't act for nuts, but that's not your fault—"

"Thanks."

"It's the fault of those who employed you. They thought I was nobody in particular. That's their fault, not yours. They looked for a girl who was nobody in particular to keep an eye on me—"

"Thanks," she said again, rather crossly. She was hurt.

"A nice girl," I said.

"You make it sound like an insult," she said, still cross.

There was very little more time to talk. On the ship's DF map I saw

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we were within a couple of miles of the spot where we'd landed the evening before. I looked for the bearings I'd taken then. I had to put the machine down in exactly the same spot.

"When we leave on the *Jupiter,* I'll be off duty," I said.

"That will be a great thrill for me. Especially as I won't be there."

"Perri," I said earnestly, taking the machine down carefully, "you have to go with me. I'm not proposing to you—"

"I didn't think you were."

"But I wouldn't like anything to happen to you. I told you, Molle won't be pleased."

She thought of something and flashed at me: "You want me as a witness, is that it? To tell all I know about Molle and back up your story?"

"I'd be lying if I said that hadn't crossed my mind."

"Then I'm certainly not going."

"Perri, I've been straight with you. I was going to tell you nearly everything yesterday when you came back from the lake, but something happened. Believe me, you won't do yourself or Molle any good by staying here."

We landed, and then we couldn't talk openly any more.

I went out, picked up the judas and put it back exactly where it had been. Then I looked at the helicopter's feet—they weren't wheels—and kicked the sand around so that there was nothing to show the machine had ever made the flight to the Devil's Teeth Mountains and back—except, of course, the fuel in the tank, or lack of same.

Then I took a long look round. It was now full day, hot and getting hotter. There was no sign of any ship having landed in the immediate vicinity.

Was I going to get away with it? Maybe. The trouble was, I'd switched the ignition off the night before at about the equivalent of 9:00 p.m. on Terran reckoning. It was now at least 10:00 a.m. Terran reckoning, and the ignition apparently wasn't on yet.

I was just climbing back into the helicopter when I heard something. And then I saw the spot in the sky.

I leaped in, slammed the door, and told Perri: "Get back to bed."

She was going to be awkward in about a hundred ways, but I hadn't time to listen.

"Perri," I said grimly, "it's not just the Buccaneer question. It's your life and mine. If you really brought along a honeymoon nightie, in case I wondered why you hadn't, put it on and get into bed. The big bed. Shut the curtains and spread up the two bunks as if they'd never been slept in. Got that?"

She understood the urgency, if nothing else, and left the main cabin.

I had switched off the ignition after landing and put the key in my pocket, because the ignition had to be off when I reconnected the microphones. This I now did, not rush-

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ing it, making sure no one could ever be sure they'd been disconnected. Then I hurried through to the bedroom, uneasily aware that the motors were warm and that if anyone thought to feel them, anything Perri and I did was a waste of time.

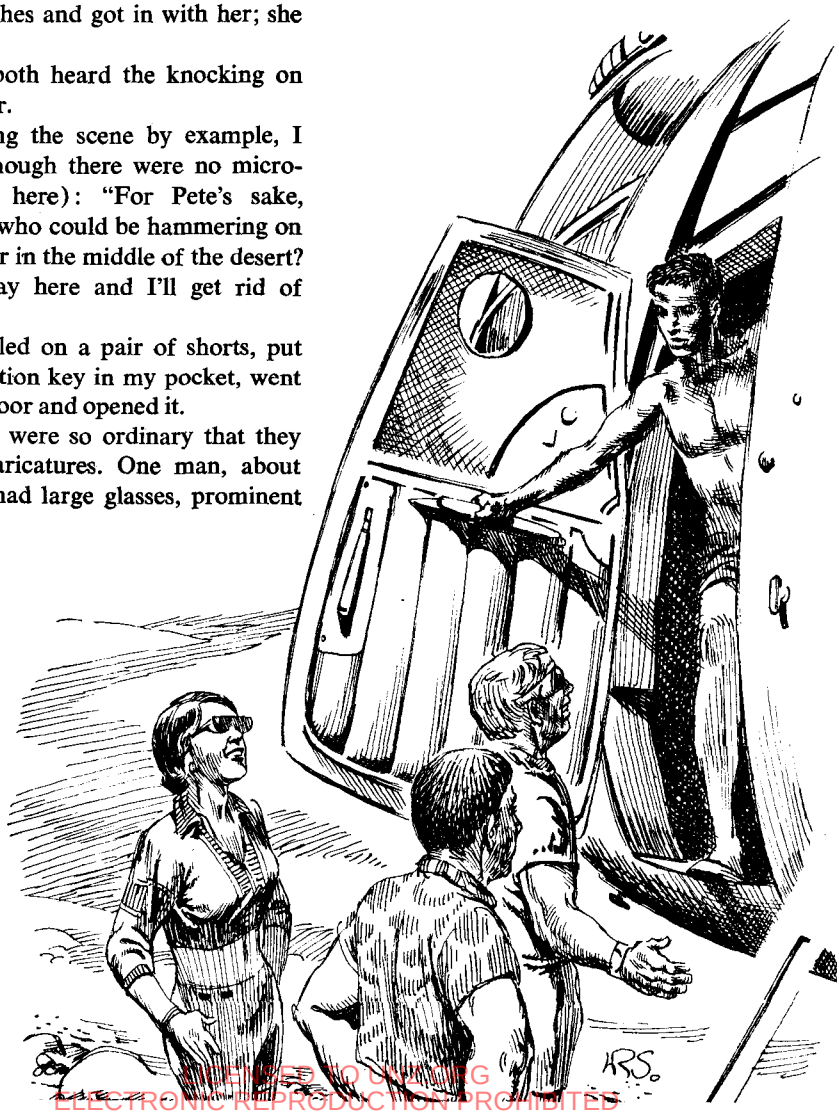
Perri was in the big bed, and desperate to ask questions. I threw off my clothes and got in with her; she froze.

We both heard the knocking on the door.

Setting the scene by example, I said (though there were no microphones here): "For Pete's sake, honey, who could be hammering on the door in the middle of the desert? You stay here and I'll get rid of them."

I pulled on a pair of shorts, put the ignition key in my pocket, went to the door and opened it.

They were so ordinary that they were caricatures. One man, about thirty, had large glasses, prominent



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teeth, and wore a white shirt and shorts. The woman, a few years younger and similarly attired, had a permanent nervous smile and a nearly incessant nervous laugh. She couldn't talk and she could scarcely listen without sniggering. The second man stood with his hands clasped behind his back.

"Hi," I said rather blankly.

They seemed taken aback. "Hello," said the first man. "We saw your ship and wondered if there was some trouble . . ."

"Why?"

"Well, it's late in the morning, and we could see from the air the ship was shut up, and we couldn't see anyone near . . ."

And the microphones and judas have been dead for more than twelve hours, I added silently, on their behalf.

I turned my head. "It's O.K., Perri, just a couple of people who wondered if we were in trouble."

"Huh?"' came her voice faintly. "Who's in trouble?"

Whether she intended to or not, she'd given me an excuse to go back, trailing two of the strangers behind me—naturally they took advantage of any shadow of an excuse to take a look round.

Perri was pulling back the curtains at the side of the bed to let in the morning sun. We saw a long, slim, bare back. When she heard us she reached behind her, not turning, and drew the bedclothes up about her.

"Sorry, sorry," the man babbled, getting out fast, while the girl twittered and whinnied: "We didn't mean . . . we had no intention . . ."

"Stay for coffee?" I said as we passed the kitchen. "Just a minute." I took the ignition key from my pocket, crossed the main cabin and switched on.

"You switched off the ignition?" said the ASO man, as if he hadn't known it was off.

"Of course."

"What for?"

"Regulations."

"What regulations?"

"Fire risk."

"Oh—You're from Earth, aren't you? Just visiting?"

"Sure."

"And on Earth there's a regulation—?"

"All heating circuits to be cut at night in unattended cars and hoppers." It wasn't so, but they wouldn't be able to check on it until I was off the planet—if they bothered.

"But this machine wasn't exactly unat . . . oh, I see. Sorry. Sorry again. We'll get back to our ship."

"Quite right to check," I said. "You never know."

They didn't wait for coffee. They'd seen the ship still exactly where it was supposed to be; they'd seen what appeared to be a complete explanation why the ship was still dead late in the morning; and they'd been offered a not unreasonable story for the ignition being off from evening to late morning.

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Of course, I'd been lucky. ASO might easily have got moving sooner, and these three would have found a blank spot where the ship was supposed to be. But probably the dead microphones had aroused no suspicion until quite late in the day, when we might be presumed to be up and about.

Perri was dressing by the time I got back. We talked with our eyes, but didn't risk words.

There's no point in reporting anything we said during the rest of the day, apart from a couple of times both outside the ship, because all day we remained fully aware of the microphones.

We took off soon and flew all over the place as if I were a tourist determined to see as much as possible in the short time remaining, even if only from the air. The real reason for this was to confuse the issue regarding the fuel left in the ship. If you're supposed to have done three hundred miles and have really done twenty-two hundred somebody's bound to find the discrepancy and wonder at it. But if you might have done anything between three thousand and five thousand, and the fuel seems to indicate anything up to six thousand, only if a very thorough check is being made does this seem highly significant. I could have tampered with the fuel feed to create a small leak, but I preferred the other way.

How Perri was going to jump finally remained uncertain, but I thought she trusted me a little more than she trusted ASO and feared me less. That morning visit had given her a fright, judging by the wholehearted way she cooperated, and she must by this time have realized that after that it would be hard for her to make any sort of peace with ASO.

I made it harder.

When we started to come down in the Last Ocean, quaintly named because although it had indeed been Molle's last ocean, the seabed had been dry ten thousand years before the first human settler landed, she merely said, mindful of the microphones: "Why are you landing here, Jack? There's nothing but sand and rock."

"I want to spend a half hour sunbathing in the hottest spot on Molle."

"The hottest spot? Surely not. The equator is quite a bit north—"

"And the seabed here is eleven miles below mean—what we call sea level on planets that have seas. It's a suntrap. I've read about it. Haven't you?"

"I always flunked geography," she admitted.

Anyway, she did her bit, changing into her swimsuit again and following me out.

I couldn't reasonably switch off the ignition this time, but with the door shut the microphones were as good as dead.

The place had been well chosen and the instructions I'd been given

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adequate. We walked three hundred yards, Perri a little puzzled but not asking questions in case it was the wrong thing to do.

In the sandy pit shielded by three rocks I began to dig with my hands. Perri looked around her uncertainly, and kept quiet. There could, of course, be microphones in the rocks. She played safe.

Not more than three feet down I found the ship. The place had been chosen partly for ease in finding it, partly for inaccessibility—but it wasn't too inaccessible, in case I had difficulty reaching it: there was a railcar terminus seven miles away, and if absolutely necessary I could have hiked from there—and partly for shelter. If anyone was watching from any distance, they couldn't see what I was doing. And winds couldn't whip the sand cover from the ship; the rocks protected the spot.

Perri looked at the tiny object. It wasn't surprising she had no idea it was a ship. And so long as she said nothing, I wasn't going to insist on her knowing all about it.

I took the note from my pocket —I'd written it in the kitchen when I was reasonably sure it was safe— and put it in the message compartment. Then I set up the cylinder like the miniature ship it was, activated it, and we watched it fizz for a second or two. Then it leaped into the sky.

Perri simply had to ask then. I told her: "The capsule will home on another, large capsule orbiting far out. Too small for detection by any normal means. The big capsule is an automatic superlux job. My message will be on Earth in about seven hours."

She gasped. She was intelligent enough to realize at once that this was another thing that vitally affected her personally. Denouncing me to the ASO at the last minute, if this had remained at the back of her mind as a possible course of action, now became something very like an empty gesture.

When we landed at Scott a few hours later and left the helicopter at the airfield beside the spaceport— the terms of the hire allowed for that—I came straight to the point as we walked across the field to the spaceport terminal.

"You're coming with me, Perri?" I asked.

"I don't know—"

"You have to know. The *Jupiter* takes off in half an hour. I've just time to get you on that ship. I can do it if ASO is really not suspicious, and if you're convincing enough— you're eighteen, so you don't need anybody's permission."

"What do I have to be convincing about—being in love with you?"

"That if you like, though they'll know you met me less than forty-eight hours ago. I think the best thing is to be a bit infatuated with me, but more in love with adventure, the chance to see the galaxy,

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maybe with the idea at the back of your head of ditching me when something better comes along."

It wasn't safe to talk any more, for we were close to the terminal.

Well, ASO had never really suspected me, except for those hours when the ship was apparently motionless in the desert and the microphones stayed dead. That became obvious at the spaceport. There were raised eyebrows at the idea of Perri going with me, but she managed to play her part a lot better than she had ever played the part of a counterspy. She was wildly happy, enthusiastic, carefree: this was her big chance, a chance that wouldn't come again. It was tacitly made clear to the officials that if red tape stopped her leaving with me on the *Jupiter*, it would be impracticable for her to travel on the next ship and catch up with me, but questions might be asked and suspicions might be aroused.

There were phone calls of which one at least must have been to ASO. Perri herself was called to the phone, and just for a moment I was in the grip of nightmare. Suppose (a) she spilled everything, or (b) she was ten times smarter than me and I had the whole setup wrong.

But these were more chances I had to take. I left Perri at the spaceport and made a quick trip to my hotel to pick up what I'd left there and settle my bill. Then I returned, and the atmosphere, I was relieved to see, had not changed.

Three minutes before takeoff, we were walking out to the ship. And ten minutes later, I sighed with the satisfaction of knowing I hadn't been wrong about anything.

Jupiter was an Alpha ship, almost like a Terran ship, so we had nothing to worry about. There were few Mollean passengers and many who were practically Terrans.

Perri spent plenty of time with me, but I never saw the inside of her cabin, though we were in double cabins with three ways of intercommunication—direct, by the passage and by the common bathroom. That made the position pretty clear . . . she didn't keep me at arm's length, very much the reverse in public and in the sunrooms, but it was the old story—I could, if I liked, work on her to marry me, and even that would be no foregone conclusion, but other propositions held no appeal. And I had no intention of marrying her, because a man in my job can't get married, not if he wants to go on doing his job.

It was not until we were several days out that the inevitable postmortem came.

We were in the coolest sunroom, the smallest and quietest, where the girls wear sundresses but not playsuits or bikinis, where you drink coffee or bourbon instead of long iced drinks.

"How did you know?" she demanded.

"Really, I knew before I arrived.

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Or I guessed before I arrived. I was looking for confirmation. And I found it."

"Go on," she said. "Tell me."

"I think I once said you should give up economics."

"Yes. Also that I should have known. Why?"

"If you're a criminal, big or small, parochial, metropolitan or cosmopolitan, if you're an individual, a gang or an undercover army, there is a constant problem, dilemma, frustration. What's the use of looting if you can't spend the loot? That's how ninety-five percent of the smart operators end behind bars. A big proportion of police work simply amounts to looking around and seeing who's buying what he obviously can't afford."

Perri was still puzzled.

"Well, you're a kid," I said kindly. "And you grew up on Molle. You have no standard of comparison. But people and planets have to pull their weight. A rich man works hard, and his family rarely see him. Now look at Molle. It isn't *obvious.*

"But on Molle . . . there are no serfs. It's hard to find people to deliver letters, recharge the self-service machines, make beds—"

"Make beds?" said Perri, puzzled. "People make their own beds."

"See what I mean? You find it hard to believe that on Earth, the world with the highest standard of living in the galaxy, nobody in any hotel would dream of making his bed, cleaning his own shoes, cutting his nails, washing his clothes—unless he wanted to?"

"Now we'll take the planet Molle: Natural resources are not exceptional. There's gold and diamonds and platinum, but the exports are not sensational. Yet vast areas are developed. Fairly suddenly, rather dangerous air communication is replaced by well-planned, efficient railcar transport—a system which has many advantages but demands immense capital investment. The railcar network works well and efficiently—implying high wages paid to men and women who turn up their noses at serfdom such as making beds, polishing shoes and working in laundries . . ."

"Laundries?" said Perri.

"Never mind. Molle hasn't been making big mistakes, but the little mistakes add up to only one thing—*there's too much money there.* Molle's exactly like a minor bank clerk who buys a new house, apparently selling his soul for it . . . and then, when nothing happens, suddenly has a new car, a swimming pool, a tennis court—and *still* has money to lose on horses, baccarat, roulette. People like that always try to convince you they don't lose gambling, they win—but no cop worth his salt ever starts thinking until he's checked out such facts."

"I see," she said, no longer puzzled.

I drove the nail home. "Molle's government has been very reticent for a long time. Either the police

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ran the show, or those who ran the show used the police as a front. I didn't know which until yesterday.

"Suppose a criminal *is* smart and cautious, and patient. He buys his house, but he doesn't make improvements until it's conceivable he may be able to afford to do it. Nevertheless, he's human, and his wife wants new carpets, furniture, curtains, kitchen equipment, a bar and a cellar to stock it. He finds it hard to say no. His three daughters want more—"

"That's enough," said Perri. "What *will* happen to Molle?"

"I told you."

"I mean—not the Buccaneers. Not the high-echelon cops who ran the planet and the undercover stuff. Not the ASO, whatever that really is. The people, the ninety-nine percent who didn't know what was going on, or that anything was going on. What about them?"

"They'll have to work."

"Work?"

"They won't be shot. They'll discover that life is a tough business in which you have to pay your way and nobody can pay it for you. You will, too."

She shrank. "Have you fooled me after all?"

"No," I said easily. "But you'll have to pay your way, one way or another."

"The way I'm thinking?"

I stood up. "Perri," I said gently, "I don't want to be unkind. You're intelligent, and very pretty. But do you really think you could live in luxury as a lady of easy virtue, even if you had the talent and inclination? Up to now you've been subsidized indirectly by the Buccaneers. Now the subsidy has been removed you—"

"But that's what you're getting at, isn't it? I'm not saying I have a lot of experience, but I know what men mean when they tell a girl she has to face reality . . ."

I laughed. It was unkind, but I meant to be unkind.

"You're not facing reality, Perri, you're daydreaming. No, if you're going to keep your head above water in a *real* economy, you'll have to become useful. Merely being another kind of parasite won't do. You'll have to become worth the money you're paid for doing a job. You'll have to do something nobody in Molle has been doing for quite a while—work for a living."

I went out and left her. Perhaps she'd never speak to me again, which was the idea—to give her a chance not to speak to me again.

She'd have to speak to IP, of course. She'd have no choice.

But if she didn't speak to me again after what I'd said—which was unkind but neither untrue nor unjust—I'd be able, I believed, to erase Perri from my mind, eventually.

If, on the other hand, she did . . . well, there were plenty of advantages in having a desk job, after all. ■

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THE REFERENCE LIBRARY

P. Schuyler Miller

Swinger and Dad

If you find yourself bored at a science-fiction convention, and would like to start an argument in fannish circles, bring up the question of Edgar Rice Burroughs' place in science fiction. The Burroughs Bibliophiles won't be your combatants; they couldn't care less. Their question is whether science fiction has anything to compare with Barsoom and Pellucidar. And there may even be a troublemaker in the crowd who suggests that the early Tarzan yarns are as good candidates for SF status as the stories about Mars, Venus and the inside of the Earth. After all, when they were written, we didn't know enough about Africa to say that it could not hide an assortment of lost civilizations, strange races, and stranger animals.

Be that as it may, the paperback resurrection of Burroughs is a noteworthy phenomenon and has given a shot in the arm to would-be imitators and successors, whose work we note here from time to time. It has also produced two good but thin biographies of Burroughs, Richard Lupoff's "Edgar Rice Burroughs: Master of Adventure" (Canaveral Press, 1965)—which was really a literary rather than a personal biography—and now "The Big Swingers," by Robert W. Fenton (Prentice-Hall, Inc., Englewood Cliffs, New Jersey; 1967; 258 pp.; $6.95).

Fenton is a former free-lance journalist and present TV producer who lived for a time in Tarzana, the community in California that Burroughs founded as a result of the success of the Tarzan stories. He has had access to the writer's papers and to family recollections and uses them liberally to document Burroughs' life. The result is rather a journalistic view of that life than a thoughtful consideration of what made Edgar Rice Burroughs tick, but the groundwork will help the future biographer who does go deeper. As it is "The Big Swingers" complements rather than competes with Lupoff's earlier book.

The account of Burroughs' early life also suggests, if it does not spell out, the sources of some of the attitudes that present readers object to in the writer's earlier—and better—books. The racial and social stereotypes that appear quite casually there were the stereotypes—"WASP" stereotypes, if you want the current terminology—to which most of his readers subscribed in the first quarter of the century, and which were the tenets of his own class.

Edgar Rice Burroughs was the youngest son of a Massachusetts veteran of the Civil War who became a successful Chicago businessman. His home life was evidently

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harsh—his older brothers escaped to gold mining in Idaho—and his father apparently dinned into him the gospel that he would be an eternal failure unless he did exactly as he was told. After a happy, but not especially outstanding, period in a military school, he had a short career in the cavalry, chasing Apaches in the Southwest. (This at least provided the background for his two Apache novels—two of his best books.) He then settled down to being a notably unsuccessful businessman, before almost accidentally becoming a successful writer.

The racist, nationalist, militarist attitudes in the early books, consequently, came there quite naturally and unthinkingly. Because his readers shared them, and the editors to whom he sold his stories knew it well, these now-questioned values were taken for granted. But Burroughs did change his attitudes in the later books, and it is one of the shortcomings of "The Big Swingers" that nothing suggests why he changed—why he questioned the values he had held so unthinkingly as a young man, why he satirized things that had been sacred (however clumsily and heavy-handedly—though no more so than SF's "own" Stanton Coblentz).

I hope that someone will consider it worth his while to write that kind of biography, too, while the rich sources that Robert Fenton has used are still available, and while he can talk to people who knew Burroughs in his later years—the years of change, when in treatment his stories came closer to the approach of science fiction than they ever had in fact before.

EARTHBLOOD

By Keith Laumer & Rosel George Brown • Doubleday & Co., Garden City, New York • 1966 • 253 pp. • $4.50

Here's a good space opera of the far future—evidently centuries after the era of Retief—which just misses being extremely good. It was serialized earlier in the year in *If*.

Roan is of pure Terran stock, a bootleg embryo bought by a humanoid couple on one of the worlds in the polyracial galaxy that has followed the collapse of the Terran Empire that Retief struggles to save. He is brought up in a ghetto, is kidnaped into a circus, works as a talented freak, is shanghaied again by a Terran space pirate, and eventually finds himself an officer in the Terran Navy, with a crew of nonhumans, fighting the Navy itself for the good of his dream home.

Exotic as the early parts are—as you might guess from the monstrous beings with whom Retief contends in Laumer's other stories—they are the least successful part of the book. This part needs someone like Avram Davidson to bring it to life and make its nonhumans real. Once the action starts swinging, all the Laumer speed and vigor comes into play and we're on our way. At

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the end, the colossal secret of Roan's ancestry is rather saltless but by that time it has been made clear that he is driven by an irresistible force that is not going to let him swerve.

OUT OF MY MIND

By John Brunner • Ballantine Books, New York • No. U-5064 • 220 pp. • 60¢

It is easy to forget what a really good writer John Brunner is, or has become. He started quietly, some years ago, as one of the "new" British school that John Carnell was developing for his *New Worlds* and *Science Fantasy,* as John Campbell before him had done for Astounding. Then we were hit hard and quickly by the two novels, "The Whole Man" and "The Squares of the City"—the former my own choice for a "Hugo" in its year, the latter a *tour de force* if ever there was one.

Now the thirteen stories in this collection demonstrate how good Brunner has been all along. They go back to 1956 and represent the author's choice of stories he has most enjoyed writing during the past decade. They are not all science fiction, but most of them are. They demonstrate a fine record of sustained performance. We'll take them in order:

"Fair Warning"—a possible fantasy (or is it time-travel?) about an aborted nuclear bomb test: an attempt to start the carbon-nitrogen cycle on Earth. (Here in Analog in 1964.)

"The Nail in the Middle of the Hand"—a grisly little story about technological skill, exercised two thousand years ago.

"Orpheus's Brother"—fantasy or abnormal psychology: you decide. Fans have torn a pop singer to bits as the Bacchantes did Orpheus.

"Prerogative"—another very short borderliner. Was the biologist who had created viable life struck by lightning?

"Such Stuff"—I'm sure you've read, and remember, this story about the man whose dreams were suppressed, and who found a way to regain them.

"The Totally Rich"—one of the most haunting stories in the lot. It's easy to believe that the "totally rich" are unseen among us, and that at times they, too, are as vulnerable as we.

"See What I Mean?"—Brunner has apparently been a "Ban the Bomb" activist. This story suggests a psychological solution for the intransigence of statesmen. (Here in 1963.)

"The Fourth Power"—introduces the idea of the profession of synthesist, able subconsciously to salvage and fit together the bits and pieces of theory and phenomena that mere scientists would waste. And where do we go from there?

"The Last Lonely Man"—the ugliest story in the lot, which I suspect you'll also remember. We learn

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to eliminate loneliness by exchanging personalities. But there are some personalities no sane man would want mixed with his.

"Single-Minded"—Russia has discovered a virus that gives people telepathic powers. It then exiled the research team to the Moon, where they rescue a Western astronaut.

"A Better Mousetrap"—are we, as Charles Fort suggested, the "property" of some stellar race? Or are we pests?

"Eye of the Beholder"—the finale is pretty obvious but the question raised is good. It's accepted doctrine in SF that totally different races need not have the same values as ours. But what if they do?

"Round Trip"—in which the author solves—and complicates—the problem of the origin of the universe.

FOUR FOR TOMORROW
By Roger Zelazny • Ace Books, New York • No. M-155 • 191 pp. • 45¢

This is certainly going to be one of the "must" books of 1967, and why it appears as a paperback instead of in hard covers is something that hardback publishers will have to thrash out among themselves. With Cordwainer Smith's death last fall, Zelazny certainly stands alone as the most unusual and promising of the newer American SF writers. This collection of four novelettes, introduced by Theodore Sturgeon, shows just how untyped and untypable the author still is. He may eventually fall into a pattern, as Sturgeon himself has done of late, but there are rich years before it happens.

Two of the stories are the double-award-winner, "The Doors of His Face, The Lamps of His Mouth," with its meticulously realized crisis of monster-fishing in the seas of Venus. Awards or no, it is the least of the four, as the other previously anthologized "A Rose for Ecclesiastes" is the best and most moving in its portrayal of a dying, degenerate Martian culture and the strange relationship a young man creates with it.

The other two stories will be less familiar. "The Furies" can be read as a story of a strange future, very like something in a corner of Cordwainer Smith's haunting cosmos, or as a fantasy. Three bizarrely gifted individuals from as many worlds unite to hunt down and kill an outlaw—with whom the reader identifies more and more as his doom closes in on him. "The Graveyard Heart" has even more of the Smith tone and touch; it is also one of the first and by all odds the best of the stories that have extrapolated Ettinger's proposal—already being put into effect by entrepreneurs in several states—for immortality through frozen death. The Sleepers live forever, waking from time to time for a round of partying, while the world evolves without them.

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And if you like this sample, look for Zelazny's two pb novels of last year: "This Immortal"—expanded from a Hugo-winning novelette, and "The Dream Master"—whose shorter version won the Nebula award of the Science Fiction Writers of America. They are both on the Ace shelf, and Ace should keep them there.

Some big league reprints

DWELLERS IN THE MIRAGE
By A. Merritt • Avon Books, New York • No. S-271 • 222 pp. • 60¢

Many readers consider this the best of Merritt's "lost race" stories, and it is his least archaic by modern standards of writing. (I still prefer "The Face in the Abyss.")

RING AROUND THE SUN
By Clifford D. Simak • Avon Books, New York • No. S-270 • 200 pp. • 60¢

Another classic reissued.

THE EDGE OF RUNNING WATER
By William Sloane • Bantam Books, New York • No. H-3427 • 204 pp.

TO WALK THE NIGHT
By William Sloane • Bantam Books, New York • No. H-3426 • 181 pp. • 60¢

These two novels have been reprinted as part of Bantam's new series of "tales of supernatural horror." The others are mainly short story collections—weird and horror yarns with a very little SF mixed in—but these are definitely not supernatural. They are two of the best original SF novels of the pre-war years, so read 'em.

THE MIND CAGE
By A. E. Van Vogt • Tower Books, New York • No. 43-776 • 251 pp. • 60¢

A paperback publisher whose books I rarely see is treating his pb edition of Van Vogt's 1957 story as a sex yarn. Needless to say, it isn't.

A JOURNEY TO THE CENTER OF THE EARTH
By Jules Verne • Collier Books, New York • No. 02623 • 347 pp. • 95¢

Verne is in the public domain, so you can expect to find new paperback and hardback editions popping up at any time. This is a reissue, with new cover—and I think, illustrations—of the 1962 Collier pb of Verne's best adventure yarn.

THE LEGION OF TIME
By Jack Williamson • Pyramid Books, New York • No. X-1586 • 204 pp. • 60¢

Whoever did the cover and title page for this paperback evidently didn't discover that the 1952 Fantasy Press edition contained *two* of Williamson's early (1938) time-adventure yarns: the title story, about alternative time-streams, and "After World's End," about the far future. They're old-fashioned, but they do move.

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BRASS TACKS

Dear Mr. Campbell:

I am a high school senior and regular reader of Analog. Recently I encountered a puzzle in physics which I should like to pass on in hopes of an answer.

It concerns Einstein's time-dilation principle. There are two observers, A on earth, B in space traveling at two-thirds the speed of light. The problem was to find out what time one's clock would read when the other's read a certain time. According to my figures, B's timepiece would run at seventy-four percent the speed of A's.

My physics teacher, however, disagrees. To use a specific example, he says that when A's clock registers one-half hour, B's would read twenty-two minutes as seen by A. With this I agree. However, he then stated that when B has a reading of thirty minutes, A's reads twenty-two as B sees it.

His reasoning is thus: from A's position he is stationary, and B is moving at two-thirds light-speed. Thus, as A sees it, B has three-quarters of the time lapse of A. *But,* from B's viewpoint, it's A who is clipping along at 2 x 10^8 m/sec, and from his spot it's A who has the slowed time. This implies that the time dilation is only relative, and that if B returns to nil velocity, his clock would match A's.

This alone is something. However, as I extrapolate it, then the mass and length variations would be observational only, and the speed of light could be exceeded. Personally I doubt this, but I have been unable to find a flaw in his logic.

Therefore, could one of your other readers find the error, if any, in this work? It may seem trivial, but as one who has nearly memorized Heinlein's "Time for the Stars," it's rather important to me.

GRIFFIN MITCHELL
2131 Tilson Road
Decatur, Georgia 30032

My impression is that no one yet has developed any proof of how to determine which one is experiencing slow time.

Dear John,

I've been planning to write for some time on several subjects but just don't seem to get enough time to assemble an adequate presentation.

I'd especially like to comment on Doug Dederer's "Political Science" and your editorial speculation on

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the Apollo disaster. Doug's article presents an eloquent historical survey of federal procrastination and misdirection in past space efforts. Unfortunately, his conclusion that money is a key problem in the present space program is completely unsupported by the rest of his article. It is my sincere belief that significantly lower budget levels would be more than adequate to accomplish present goals if only they were used effectively.

While your speculation on the actual cause of the disaster seems to have been quite wrong, your editorial probably strikes nearer to the true problem. The collective "mind" of the program has become thoroughly mired in a combination of civil service red tape and empire-building, technical inertia, and industrial profiteering.

I apologize for slinging brickbats which are so poorly documented. At present I'm trying to earn a Ph.D. Between this and trying to support a wife and two children on a Research Assistantship I have little time for unessential activities like this letter, much less assembling the proper background data to document it.

Actually, Mr. Christian's letter in "Brass Tacks" provided the incentive to write. The Florida legislature through the College of Engineering of the University of Florida has started a program which is almost identically what Mr. Christian suggests. I quote below from "Engineering Progress" Vol. XIX, No. 1, Jan. 1965.

"It is generally accepted that the store of technical and scientific knowledge and the techniques involved in its application have expanded dramatically in recent years. Most engineers, including the most recent graduates, find that they are unable to cope with these new developments . . .

"The Educational needs of the employed engineer and scientist fall into two generally distinct categories—the engineer seeking an advanced degree . . . ; the engineer or engineering manager interested in professional improvement or retraining . . .

"The 1963 Florida Legislature recognized these facts and acted decisively. Specifically, Senate Bill 407—and a companion bill in the house—was passed. This bill provided the legal basis for establishing an extension of the College of Engineering of the University of Florida in East Central Florida for the purpose of providing high quality relevant graduate education, with maximum accessibility, for the engineers of the area. It should be understood that it was the intent of the Legislature to make this extension of the College of Engineering an organic and equivalent part of the College even if it was remote from the campus in Gainesville.

"The GENESYS plan was developed to implement this legislature. GENESYS is an acronym derived

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from the key letters in Graduate ENgineering Education SYstem."

At first the GENESYS system included four facilities: Orlando, Port Canaveral, Daytona Beach, and Gainesville. Last fall the system was to have been extended. I believe it now includes West Palm Beach, Vero Beach, Panama City, and Fort Walton Beach for a total geographical extent over two hundred miles. The terminals are interconnected by closed circuit television with a talk-back link which permits students in remote locations to carry on conversation with the instructors. Each facility has a small resident staff so that the students have access to advice and assistance for planning programs, discussing course problems, et cetera.

I took all my master's work and about a third of my doctoral course work through the GENESYS Program. These credits were accepted for transfer to schools as much as two thousand miles away.

GENESYS is a fairly small start, and has had a fair amount of difficulty. A surprisingly small percentage of the engineers and scientists who complain of the lack of educational opportunity are willing to put out the time, money, and mental effort to complete serious graduate-level courses. Some of the industries are less than enthusiastic about letting their employees attend classes during the daytime, while it is very difficult to cram a comprehensive course into the hours after work and before a civilized bedtime. In the case of the doctorate, traditional requirements are intentionally tailored to require at least one academic year of study at a pace which precludes full-time employment.

Nevertheless, the start has been made and should provide a very valuable starting point for Mr. Christian and others, "Persons interested in fanning the flame . . ." as he says.

KEN DUNIPACE
123 Freedom Drive
Clemson, S. C. 29631

Sounds like a highly useful program!

Mr. Campbell:

Re your "Incommunicado" editorial (Analog, July 1967):

1. You say that unlimited popular democracy is unworkable. True; however, contrary to your thesis, this has little to do with the communication among hundreds of millions of people. In a really *unlimited* popular democracy, the citizens agree that any fifty-one percent of their number can legally rob, enslave, torture, and/or kill the other forty-nine percent. Who would tolerate such a system?

2. You say the United States has been tremendously successful using *representative* democracy, not *popular* democracy. But the essential point is that our government is constitutional and that the U. S. Constitution protects the freedom of

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the individual citizen by greatly *limiting* the powers of the government, thereby also *limiting* the powers of the majority of voters. To a considerable extent, the U. S. Constitution is anti-democratic—thank goodness!

The Constitution was imperfect to begin with and has been stretched out of shape, but would you want to live in this country if the Constitution were abandoned, if majorities in the House and Senate could pass any law they wanted and have it enforced?

3. The natural result of individual freedom and limited government is capitalism, the system that built America. However, the U. S. never completely accepted capitalism; more and more people rejected it because they were taught that it is evil and dangerous, because they feared the built-in justice of its competitive system, because they wanted the right to use force for personal or group advancement.

The riots you mention will not stop until people understand that control of cities and universities rightfully belongs to those who pay for said cities and universities—the capitalistic principle of private ownership.

You bemoan the lack of hierarchy today. Capitalism's free market enables each person to *earn* a place in the society, as high as his ability. Where there is a free market, relationships between people are generally fair, efficient, and uncoerced.

You say we need a new cultural-social system. Anyone for capitalism?

LEM D. HARRELL
4616 N. 23 Road,
Arlington, Virginia

1. *In Rome, under popular democracy of the mob-rule type, that's precisely what they did do.*
2. *The British seem to have done well without a constitution.*
3. *Terms need exact definitions! How about "People's Capitalism"?*

Dear Mr. Campbell:

Mr. Perkins's article "Target: Language" has moved me to write after some twenty-five years of passively enjoying ASF.

(As an aside, do you realize that one of your major effects has been sociological, in the sense of shaking youngsters loose from the comfortable ruts of thought which they are constantly encouraged to enter? Twenty-odd years ago in a small Midwest town, ASF was a regular and formally forbidden breath of the rigorous exotic—an affirmation that the conventional isn't necessarily good, that accepted truth ain't necessarily so. And a reminder that something else can be equally so, or more so. Very comparable to *Play, Ramparts, Evergreen,* and *Realist* today—definitely under-the-jacket type reading, definitely important.)

Anyway: Mr. Perkins's article was generally quite delightful, so let

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me now offer just a few cavils:

1) Who proofread the damn thing? Minor point, but enough goofs sneaked through to interfere with the reading (e.g., pg. 89, line 12: "ni" is not both dative and genitive in Japanese. Genitive—such as it is—is "no"). And pg. 88, a German cat is a "Katz," not "Kater." I dread to see what your printer will do to this letter if you print it.

2) Cinderella's slipper—I suspect that the confusion was not between *fourré* and *verré*, but between *verré* (modern French *vairé*, "adorned with ermine") and *verré* "glassy". Pronounced alike.

3) Japanese isn't really as vague as all that (pg. 88), although European/American grammars give that impression. Both Japanese and Chinese toss in "meaningless" (i.e., untranslatable) particles with sufficient gusto and wisdom to make any statement crystal clear—unless, of course, they're *trying* for double and triple meanings, as in some poetry or most official bureaucratic utterances.

4) The basic thesis of the article is very attractive to any Buddhist (where did the baby *get* that language/thought pattern he's translating into and back out of?), but I must bring up the classic case of the child raised with a German father, English mother, French nurse, and Russian gardener. Who understandably concluded that everyone has his own language and started busily inventing his own. (Mentioned, I think, in Jespersen's *Language*.)

5) As for "giving the computer its own language"—that shakes me. I've been working with the beasts as logic designer, technical writer, applications engineer, programmer and so on for the past eight years. In one sense, just how do you give a simple-minded binary machine a language? In another sense, considering language as a preferential patterning process, or even as a way of handling a stimulus, each computer already has its own language, and it can be pretty rough on the human-type engineer trying to debug and civilize a computer which was even partly designed by another computer—especially when it was designed to operate primarily with another computer. Believe me, we don't have to "give" a language. It's developing very nicely all by itself.

A stimulating article, Mr. Perkins. And John, keep up the good work.

RICHARD PETTERSEN
2805 Egypt Road
Audubon, Pa. 19401

There was an Egyptian pharaoh, wanting to know the Original Language of Man, who ordered that fifty newborn babies be given entirely into the care of mutes, so they would not be exposed to any language and the instinctive Original Language would appear. Five years later the children were all fluent in sign language.

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continued from page 7

extremely important communication tool; for the beaver it's both communicative and constructive.) The primates developed sonic communication, and the tail became less and less important—unfortunately. For some mysterious reason, only the New World animals developed prehensile tails—but there you find prehensile-tailed species in several totally unrelated species such as marsupial opossums and primate monkeys! Maybe a case of "monkey see; monkey do"?

However, bipedal aliens have an additional advantage; not only does bipedalism free two limbs for tool-using and tool-carrying, it also makes possible a kind of agility no quadruped can match. The essence of the bullfighter's advantage over the bull is that the bullfighter, being a biped, can jump in *any* direction from a standing start. A charging bull has committed himself; no quadruped has the directional agility a biped does.

It makes a biped more dangerous. And our intelligent alien will, of course, be the most dangerous fighting animal—*purely as an animal*—on his planet. He will have evolved deadly ferocity and capability *before* he evolved intelligence!

It's long been said that a culture must have a leisure group that is not pressed by subsistence problems before a high-level civilization can arise. When all men are too busy scrabbling for food, from dawn to dusk, nobody has time to sit around and think of domesticating horses to pull plows, or of irrigation ditches.

Equally, until a species becomes so ferociously deadly *as pure animals* that it doesn't have to spend all its energies avoiding would-be consumers and/or managing to catch dinner themselves—they don't have the leisure to develop intelligence.

Stanley G. Weinbaum once suggested an impossible situation—a vegetable species that had evolved extremely high intelligence, but was being steadily plucked and eaten by an animal species of low intelligence. What good is intelligence if you don't have the physical-mechanical power to apply it against your enemies? *First* learn (evolve) how to be a ferociously dangerous animal, with excellent senses, muscles, bones, and agility; *then* evolving intelligence can really do you some good.

Also, our intelligent aliens will be omnivores. The essence of a successful animal species is adaptability—and it's obvious that an omnivore is more adaptable than either a carnivore or a herbivore. Some of the Western Indians were quite able to live with reasonable comfort in Death Valley while crossing that

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horrendous strip of country; no herbivorous horse or carnivorous puma could have made it. A puma wouldn't chew and suck the water out of cactus plants—and a horse wouldn't eat the fairly abundant insects and small mammals native to the area.

The alien will be unarmored: armor as a way of survival has been tried by every type of animal life that's come along. The mollusks tried it. The fishes tried it. The amphibians tried it. The reptiles did, and even the mammals did.

It's never been very successful. Oysters survive not because of their armor, but because of an incredible fecundity, and a highly mobile, unarmored developmental stage. Turtles are great egg-layers—but be it noted that their armor doesn't protect them against the dozens of creatures that bother to go after one. The horsehoe crab isn't so much armored as possessed of an exoskeleton of excessive size. There's so little crab and so much skeleton that he's simply not worth anybody's time and trouble.

Triceratops tried armor, too. So did the French, with their Maginot Line. Battleships tried it, too—and it worked for less than a century.

Agility and excellent perception and location mechanisms work better—they're more adaptable. A thin skin, with no fur armor, but equipped with a few million guard hairs as tactile sensors is a remarkably efficient sensing and detecting device. Pay attention to the thermal sensors in your skin, and you don't have to burn yourself against an unseen hot surface—you can perceive it inches away. But in trying to penetrate noiselessly through an encumbered area, the millions of sensitive guard hairs in your skin will tell you before you make contact that an obstacle is present.

Also, as your species spreads toward the equatorial regions of your planet, the ability to strip down to zero thermal insulation helps a lot —as does the ability to add whatever thickness of thermal insulation your Arctic Zone demands.

The reason Man is the Intelligent Alien of this planet, after some three billion years of exceedingly rugged competitive testing can fairly be assigned to "His mechanism works better than anything else, any and all other species, families and genera have thrown against him. Otherwise he'd be dead."

But these factors that apply to why we are what we are physically apply equally well in a less popular area—what we are behaviorally.

It can reasonably be predicted that the Intelligent Alien will be aggressive, competitive, a natural-born killer, acquisitive, ambitious, and given to hate, prejudice, and warfare.

It's interesting that all of those characteristics have been demeaned, damned, and denounced by generations of philosophers—just as man's

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weakness, poor senses, slowness, and physical inferiority to the animals has been insisted on for the same generations.

Man is *not* physically inferior to the animals; pound for pound, he's more powerful, and more competent than any other animal—and he can outfight several times his own weight, and, quite routinely, does. Watch 160 pounds of bullfighter against 1,600 pounds of bull, for instance. Or, in less lethal conflict, a cowboy bulldogging a steer.

And just as those old philosophers were wrong on that matter of physical competence—they were, and are, wrong on the characteristics of behavior they so condemn!

We can start with an Ode To Hate. It's one of Man's unique and magnificent possessions—a characteristic that only Man, the highest life form of Earth, has yet developed.

And that one fact alone should give any honest philosopher pause! *Why* does Man, and Man alone, of all Earth's animals, have that characteristic? *Why,* if it's so bad, wicked, evil, destructive, vicious, and awful, does the product of two or three billion years of harsh, ruthless selection possess it?

First, distinguish carefully between *anger* and true *hate.* Anger is a short-term immediate response to intense irritation of an emotional level; hate is a long-term, long-lasting thing—not an explosive, sudden, but short-lived reaction.

One of the reasons that Man alone of Earth's children has true hate is that it requires a long-span time-binding determination—it requires the ability to hold a determination over long spans of time, with conscious, not merely instinctive, decision. A rabbit doesn't have brains enough to *hate* a fox; it can't remember—consider-decide-determine—long enough. It can only feel anger for a short while—and when the short time has elapsed, the anger is gone essentially without a trace.

The doe cannot *hate* the wolf that kills her fawn; when the wolf attacks, she will do what she can to drive him off, lead him away, to protect the fawn. She may strike at the wolf in furious anger with her sharp and deadly hoofs.

But, if the wolf eludes her attack and kills the fawn, she soon darts away to protect herself from injury. Logically, she's doing the correct thing; since the fawn is dead there is nothing she can do to the wolf that will help the fawn any.

Human beings, however, have a characteristic the wolf, the deer, and the rabbit alike do not understand. They hate.

That's one of the reasons they rule the planet. They hated the wolves in Europe. When a wolf killed a child, the parents didn't recognize the logical truth that nothing they did would bring the child back, and quickly forget the wolf. They organized a wolf hunt, and quite

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nonlogically killed wolves that had not hurt them at all. They did this not because they were angry, but because they *hated*. They hated wolves; they hated with a long-term, persisting determination to eliminate that menace.

The modern appeals for funds to support cancer research, heart disease studies, virus research are all addressed to that ancient human-and-human-only characteristic *hate*. The long term determination that *this we will not put up with; we will attack!*

Before WWII started, many French and English leaders were angry with Hitler's behavior; Winston Churchill was one of the very few who were wise enough to hate him. He hated Hitler until, like the wolves of Europe, the menace was extinct.

Hatred is a costly thing; it requires the willingness to sacrifice present comfort for long-term gain —which is not an easy thing to do.

Only intelligent entities can perceive the necessity of hate—but any animal can feel sudden anger.

Our Intelligent Alien will be a long-time, persisting, determined entity; he will be capable of hate and organized action and planning to abolish a menace.

Incidentally, notice that it's confusion between animal *anger* and true *hate* that makes the sob-sister do-gooders say that punishing criminals is "merely expressing anger."

Note that while it was true that, generally speaking, wolf hunts started because a child had been killed by wolves, by keeping up that human activity of wolf-hating, Europe was freed of wolves—save for those kept in zoos.

The research that led to the Salk vaccine, and the effective end of polio as a major menace, was quite largely sparked by Franklin D. Roosevelt. It wasn't just anger at what polio did to him—it was long-time, persisting, planned determination; it was true hate.

Sure, hate can be misguided and misused; can you name anything that can't be? Knives are tools for murderers, housewives and surgeons —as are automobiles.

Prejudice is also inevitably a characteristic of intelligent entities; prejudice is simply a predetermined conclusion, based on evidence from previous experience that the individual entity believes is applicable to the present problem. Since only intelligent entities have the long-time-span memory, and the high ability to learn from experience, only intelligent entities *can* display what we call "prejudice." It's simply the act of applying previous experience-learning to a present situation.

Animals have a sort of a kind of prejudice in their instincts; a newly hatched rattlesnake has instinctive information that leads him to attack certain creatures as food sources, and flee others as predators. That's a kind of prejudice—prejudices

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hard-won by *n* generations of ancestors.

And since the ruling life form on a planet must have achieved that rule against the all-out deadly competition of every other life form on that planet, you can bet they are natural-born killers. They aren't descended from the local rabbits, nor from any herbivore—unless they turned carnivore somewhere along the line! We're descended from insectivores; the gorillas and chimpanzees didn't make the grade pretty largely because they turned herbivore; we remained omnivores, with a strong predilection for red meat. (Meat allows the eater to get his needed fuel and body-material with a minimum time and effort spent garnering and digesting, leaving available time and effort for other activities.)

Being natural-born killers, and given to hate is a start toward world rule—but by no means enough. For one thing, ambition and acquisitiveness are essential; you have to *want* the world in order to be willing to spend effort getting it. The noncompetitive will inevitably be pushed aside; the competition will be between those who are aggressive and ambitious—but *not necessarily belligerent.*

There's another area of terrific confusion in the usual discussions; *belligerent* and *aggressive* are totally distinct and unrelated concepts. Aggressiveness *does not* involve belligerence, any more than being able to see involves having blue eyes. The simplest and clearest distinction for most people is simply to consider the vast difference between an aggressive, ambitious salesman, and a belligerent salesman.

The Intelligent Alien will necessarily be the descendant of a long, long line of ambitious, aggressive ancestors—but, as with salesmen, the purely belligerent ones got removed from the company. He who lives by the sword pretty generally winds up being a sword swallower.

There will have been wars—wars over age after age of their recorded history, back to the dim and legendary wars before their recorded history began. They will have warred on each other, race vs. race, clan vs. clan, tribe vs. tribe, and nation vs. nation for unremembered ages.

War is as essential to the evolution of an Intelligent Alien as it was to Man. It isn't eternally necessary —but Man has not yet recognized why war was necessary, and until he fully does, he will not recognize that it's not the best way to achieve that which must be done. Until that time comes—and it seems a long way off, even yet—war will be necessary to Man's continuing evolution.

The fundamental necessity for war—the lethal conflict between members of the same species in defense of ideas, philosophies, cultural systems, not merely for food—stems from the nature of the evolutionary process.

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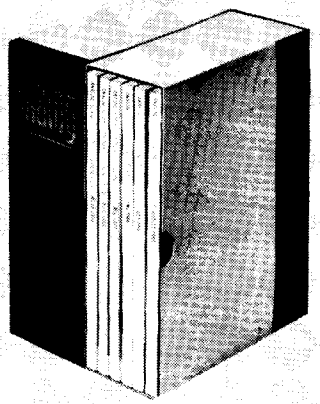
Wolves are essential to the health and welfare of deer—wolves, or equally effective predators. Wolves cull the deer herds of their weak, sick, senile, stupid and unalert; the genetically undesirable are removed by wolves. If the deer become too numerous, more wolves can live on them, and trim the herds down to a size the land can support; remove the wolves and the deer breed exponentially till they've stripped the land of all forage, and all the deer start dying of hunger.

The deer, of course, perform a like service for the predators; the weak, senile, incompetent, slow, or stupid wolf starves, while the strong, alert, smart and vigorous wolf feeds well.

When the evolving Intelligent Alien's race reaches that level of evolution where his strength, growing intelligence, competence and agility make him able to defeat any would-be predator species—when he is the unchallengeably most-dangerous-animal on the planet—he has no predator culling his species.

No animal species on Earth could cull Cro-Magnon man for weaklings; they were far too dangerous for any quadruped predator to menace seriously. Oh, sure—an occasional man would be caught by a pack of wolves, a cave bear, or slip and be trampled by an aurochs. But no animal could make a living eating Man!

Under such conditions, human evolution would have had no reason



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to push on to any greater achievements; races don't change because they want to, but solely because they're driven to it.

The only answer was, of course, that Man had to be the predator that drove Man to further evolution. Man was the only competing organism capable of applying pressure to Man, the only creature capable of culling Man's numbers to eliminate the stupid, the weak, the unfunctional.

Any Intelligent Alien will have in his history the long, long ages of War, covering the evolutionary stages between the time he first achieved absolute immunity to competing species, and the time he learned the evolutionary function of war, and developed a better substitute.

We're currently looking for one.

The Population Explosion we're now facing represents the inevitable result of having eliminated the effectiveness of most of our microscopic predators, and introduced a new cultural concept that War is evil. We're trying to convince the mass of the race that birth control is a desirable substitute for War and Disease, and necessary before the third Horseman, Famine, takes over.

Until we do get an adequate *and workable* substitute—War will inescapably continue to serve its ancient and valid evolutionary function.

The race will be culled of those with unworkable ideas.

And you can pretty solidly expect that any Intelligent Alien we ever meet will, as I say, be ambitious, aggressive, competitive, a natural-born killer, acquisitive and given to hate, prejudice and warfare.

That doesn't mean he'll be belligerent, destructive or selfish, necessarily. Of course, if he's no further advanced than we are, we know about what to expect of him—whatever idiosyncracies of form and physical structure. But, if he's more advanced, his idea of "enlightened self-interest" may go very considerably beyond our understanding, as his time-span of interest increases beyond our understanding.

A barbarian acts on the basis of what will benefit him now, and in the future—as far as he can think about the future. Since that's apt to be only about a year at most, his actions are utter folly from the viewpoint of a man who thinks in terms of the next twenty years.

And his actions, in turn, are obvious and appalling stupidity in the view of an intelligent entity who thinks in terms of the next two hundred years.

Destructive selfishness is the result of short-term consideration.

A truly high-level Intelligent Alien would not be destructive or selfish; he would treat us in the most constructive and instructive way possible—give us just what we *needed*.

However much we loathed it.

The Editor.

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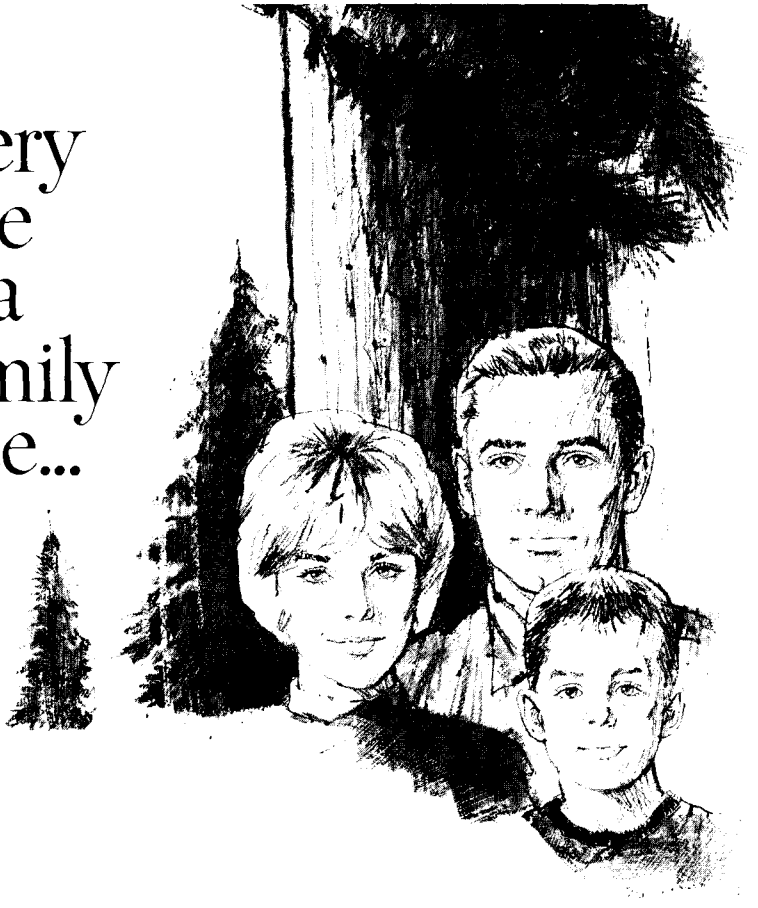

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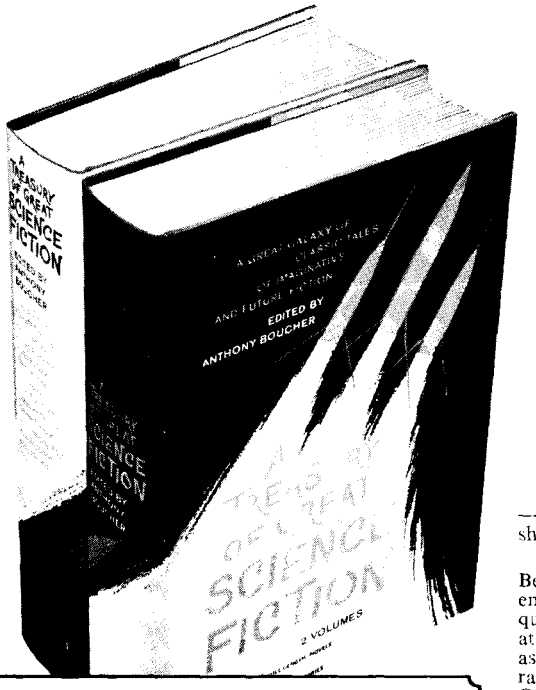

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